# CORONA GENERAL PLAN TECHNICAL UPDATE

## For City of Corona

Volume I

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# CORONA GENERAL PLAN TECHNICAL UPDATE

for City of Corona

## Volume I

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PLACEWORKS

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## ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| AAQS | ambient air quality standards |
| AB | Assembly Bill |
| ACM | asbestos-containing materials |
| ADT | average daily traffic |
| amsl | above mean sea level |
| AQMP | air quality management plan |
| AST | aboveground storage tank |
| BAU | business as usual |
| bgs | below ground surface |
| BMP | best management practices |
| CAA | Clean Air Act |
| CAFE | corporate average fuel economy |
| CalARP | California Accidental Release Prevention Program |
| CalEMA | California Emergency Management Agency |
| Cal/EPA | California Environmental Protection Agency |
| CAL FIRE | California Department of Forestry and Fire Protection |
| CALGreen | California Green Building Standards Code |
| Cal/OSHA | California Occupational Safety and Health Administration |
| CalRecycle | California Department of Resources, Recycling, and Recovery |
| Caltrans | California Department of Transportation |
| CARB | California Air Resources Board |
| CBC | California Building Code |
| CCAA | California Clean Air Act |
| CCR | California Code of Regulations |
| CDE | California Department of Education |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| cfs | cubic feet per second |
| CGS | California Geologic Survey |
| CMP | congestion management program |

# Abbreviations and Acronyms

| | |
|---|---|
| CNDDB | California Natural Diversity Database |
| CNEL | community noise equivalent level |
| CO | carbon monoxide |
| $CO_2e$ | carbon dioxide equivalent |
| Corps | US Army Corps of Engineers |
| CSO | combined sewer overflows |
| CUPA | Certified Unified Program Agency |
| CWA | Clean Water Act |
| dB | decibel |
| dBA | A-weighted decibel |
| DPM | diesel particulate matter |
| DTSC | Department of Toxic Substances Control |
| EIR | environmental impact report |
| EPA | United States Environmental Protection Agency |
| EPCRA | Emergency Planning and Community Right-to-Know Act |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| FTA | Federal Transit Administration |
| GHG | greenhouse gases |
| GWP | global warming potential |
| HCM | Highway Capacity Manual |
| HQTA | high quality transit area |
| HVAC | heating, ventilating, and air conditioning system |
| IPCC | Intergovernmental Panel on Climate Change |
| $L_{dn}$ | day-night noise level |
| $L_{eq}$ | equivalent continuous noise level |
| LBP | lead-based paint |
| LCFS | low-carbon fuel standard |
| LOS | level of service |
| LST | localized significance thresholds |
| $M_W$ | moment magnitude |
| MCL | maximum contaminant level |
| MEP | maximum extent practicable |

# Abbreviations and Acronyms

| | |
|---|---|
| mgd | million gallons per day |
| MMT | million metric tons |
| MPO | metropolitan planning organization |
| MT | metric ton |
| MWD | Metropolitan Water District of Southern California |
| NAHC | Native American Heritage Commission |
| $NO_X$ | nitrogen oxides |
| NPDES | National Pollution Discharge Elimination System |
| $O_3$ | ozone |
| OES | California Office of Emergency Services |
| PM | particulate matter |
| POTW | publicly owned treatment works |
| ppm | parts per million |
| PPV | peak particle velocity |
| RCRA | Resource Conservation and Recovery Act |
| REC | recognized environmental condition |
| RMP | risk management plan |
| RMS | root mean square |
| RPS | renewable portfolio standard |
| RWQCB | Regional Water Quality Control Board |
| SB | Senate Bill |
| SCAG | Southern California Association of Governments |
| SCAQMD | South Coast Air Quality Management District |
| SIP | state implementation plan |
| SLM | sound level meter |
| SoCAB | South Coast Air Basin |
| $SO_X$ | sulfur oxides |
| SQMP | stormwater quality management plan |
| SRA | source receptor area [or state responsibility area] |
| SUSMP | standard urban stormwater mitigation plan |
| SWP | State Water Project |
| SWPPP | Storm Water Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |

# Abbreviations and Acronyms

| | |
|---|---|
| TAC | toxic air contaminants |
| TNM | transportation noise model |
| tpd | tons per day |
| TRI | toxic release inventory |
| TTCP | traditional tribal cultural places |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |
| UST | underground storage tank |
| UWMP | urban water management plan |
| V/C | volume-to-capacity ratio |
| VdB | velocity decibels |
| VHFHSZ | very high fire hazard severity zone |
| VMT | vehicle miles traveled |
| VOC | volatile organic compound |
| WQMP | water quality management plan |
| WSA | water supply assessment |

# 1. Executive Summary

## 1.1 INTRODUCTION

This draft environmental impact report (DEIR) addresses the environmental effects associated with the implementation of the proposed Corona General Plan Technical Update. The California Environmental Quality Act (CEQA) requires that local government agencies consider the environmental consequences before taking action on projects over which they have discretionary approval authority. An environmental impact report (EIR) analyzes potential environmental consequences in order to inform the public and support informed decisions by local and state governmental agency decision makers.

This DEIR has been prepared pursuant to the requirements of CEQA and the City of Corona's CEQA procedures. The City of Corona, as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on City technical personnel from other departments and review of all technical subconsultant reports.

Data for this DEIR derive from onsite field observations, discussions with affected agencies, analysis of adopted plans and policies, review of available studies, reports, data and similar literature, and specialized environmental assessments (air quality, biological resources, cultural resources, hydrology and water quality, land use, noise, transportation and traffic).

## 1.2 ENVIRONMENTAL PROCEDURES

This DEIR has been prepared pursuant to CEQA to assess the environmental effects associated with implementation of the proposed project, as well as anticipated future discretionary actions and approvals. CEQA established six main objectives for an EIR:

1. Disclose to decision makers and the public the significant environmental effects of proposed activities.
2. Identify ways to avoid or reduce environmental damage.
3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
4. Disclose to the public reasons for agency approval of projects with significant environmental effects.
5. Foster interagency coordination in the review of projects.
6. Enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the

environmental consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR; determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines; determine that it reflects the independent judgment of the lead agency; adopt findings concerning the project's significant environmental impacts and alternatives; and adopt a statement of overriding considerations if significant impacts cannot be avoided.

### 1.2.1 EIR Format

**Chapter 1. Executive Summary:** Summarizes the background and description of the proposed project, the format of this EIR, project alternatives, any critical issues remaining to be resolved, and the potential environmental impacts and mitigation measures identified for the project.

**Chapter 2. Introduction:** Describes the purpose of this EIR, background on the project, the notice of preparation, the use of incorporation by reference, and Final EIR certification.

**Chapter 3. Project Description:** A detailed description of the project, including its objectives, its area and location, approvals anticipated to be required as part of the project, necessary environmental clearances, and the intended uses of this EIR.

**Chapter 4. Environmental Setting:** A description of the physical environmental conditions in the vicinity of the project as they existed at the time the notice of preparation was published, from local and regional perspectives. These provide the baseline physical conditions from which the lead agency determines the significance of the project's environmental impacts.

**Chapter 5. Environmental Analysis:** Each environmental topic is analyzed in a separate section that discusses: the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the project; the existing environmental setting; the potential adverse and beneficial effects of the project; the level of impact significance before mitigation; the mitigation measures for the proposed project; the level of significance after mitigation is incorporated; and the potential cumulative impacts of the proposed project and other existing, approved, and proposed development in the area.

**Chapter 6. Significant Unavoidable Adverse Impacts:** Describes the significant unavoidable adverse impacts of the proposed project.

**Chapter 7. Alternatives to the Proposed Project:** Describes the alternatives and compares their impacts to the impacts of the proposed project. Alternatives include the No Project Alternative and a Reduced Intensity Alternative.

**Chapter 8. Impacts Found Not to Be Significant**: Briefly describes the potential impacts of the project that were determined not to be significant by the Initial Study and were therefore not discussed in detail in this EIR.

**Chapter 9. Significant Irreversible Changes Due to the Proposed Project:** Describes the significant irreversible environmental changes associated with the project.

**Chapter 10. Growth-Inducing Impacts of the Project:** Describes the ways in which the proposed project would cause increases in employment or population that could result in new physical or environmental impacts.

**Chapter 11. Organizations and Persons Consulted:** Lists the people and organizations that were contacted during the preparation of this EIR.

**Chapter 12. Qualifications of Persons Preparing EIR:** Lists the people who prepared this EIR for the proposed project.

**Chapter 13. Bibliography:** The technical reports and other sources used to prepare this EIR.

**Appendices:** The appendices for this document (in PDF format on a CD attached to the front cover) comprise these supporting documents:

- Appendix A: Notice of Preparation (NOP)
- Appendix B: NOP Comments
- Appendix C: Climate Action Plan and Screening Tables
- Appendix D Air Quality and GHG Modeling
- Appendix E: Biological Resources Report
- Appendix F: Cultural Resources Report
- Appendix G: Paleontological Resources Report
- Appendix H: Hazardous Materials Site List
- Appendix I: Infrastructure Report
- Appendix J Noise Monitoring and Modeling
- Appendix K: VMT Analysis Guidelines
- Appendix L: VMT Assessment
- Appendix M: Traffic Impact Analysis
- Appendix N: General Plan Update Technical Background Report
- Appendix O: SB 18/AB52 Correspondence

## 1.2.2 Type and Purpose of This DEIR

This DEIR fulfills the requirements for a Program EIR. Although the legally required contents of a Program EIR are the same as for a Project EIR, Program EIRs are typically more conceptual than Project EIRs, with a more general discussion of impacts, alternatives, and mitigation measures. According to Section 15168 of the CEQA Guidelines, a Program EIR may be prepared on a series of actions that can be characterized as one large project. Use of a Program EIR gives the lead agency an opportunity to consider broad policy alternatives and program-wide mitigation measures, as well as greater flexibility to address project-specific and cumulative environmental impacts on a comprehensive scale.

Agencies prepare Program EIRs for programs or a series of related actions that are linked geographically; logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program; or individual activities carried out under the same authority and having generally similar environmental effects that can be mitigated in similar ways.

Once a Program EIR has been prepared, subsequent activities within the program must be evaluated to determine whether an additional CEQA document is necessary. However, if the Program EIR addresses the program's effects as specifically and comprehensively as possible, many subsequent activities may be within the Program EIR's scope, and additional environmental documents may not be required (Guidelines § 15168[c]). When a lead agency relies on a Program EIR for a subsequent activity, it must incorporate feasible mitigation measures and alternatives from the Program EIR into the subsequent activities (Guidelines § 15168[c][3]). If a subsequent activity would have effects outside the scope of the Program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, Mitigated Negative Declaration, or an EIR. Even in this case, the Program EIR still serves a valuable purpose as the first-tier environmental analysis. The CEQA Guidelines encourage the use of Program EIRs, citing five advantages:

- Provide a more exhaustive consideration of impacts and alternatives than would be practical in an individual EIR;
- Focus on cumulative impacts that might be slighted in a case-by-case analysis;
- Avoid continual reconsideration of recurring policy issues;
- Consider broad policy alternatives and programmatic mitigation measures at an early stage when the agency has greater flexibility to deal with them;
- Reduce paperwork by encouraging the reuse of data (through tiering). (Guidelines § 15168[h])

## 1.3 PROJECT LOCATION

The City of Corona is located in the northwestern portion of Riverside County, near the convergence of Los Angeles, Orange, and Riverside Counties, 45 miles southeast of the City of Los Angeles as shown in Figure ES-1, *Regional Map*, and Figure ES-2, *Citywide Aerial*. Corona is located in a valley, framed by mountains and the Prado Basin. Original settlements focused development in an area within and adjacent to Grand Boulevard. The City is bordered by the City of Norco to the north, the City of Riverside to the east, and Riverside County to the west and south. The Cleveland National Forest to the south/southwest and the Prado Basin to northeast border the City; these natural areas are barriers to the future outward growth of Corona.

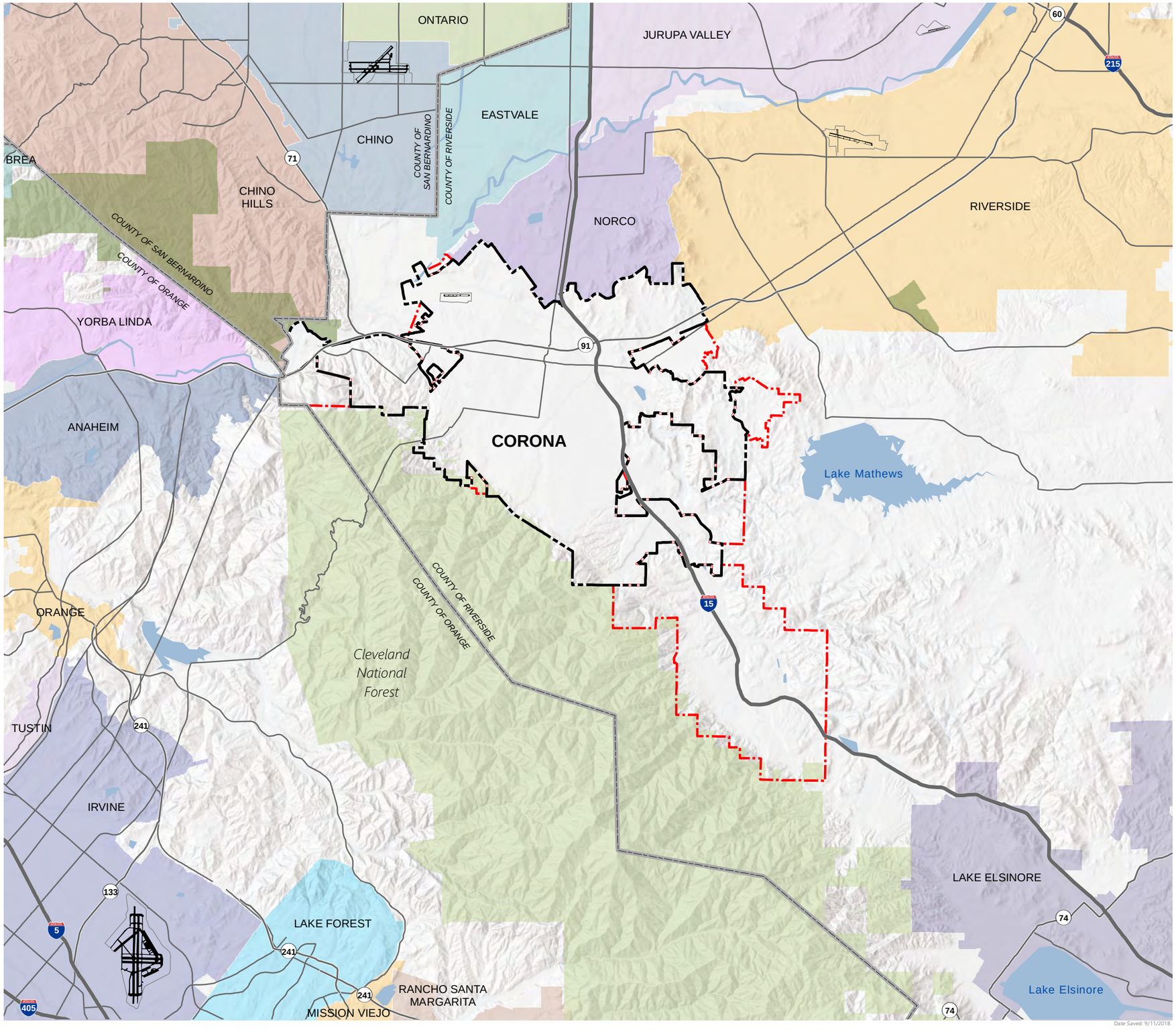


Figure ES-1

# REGIONAL MAP

Legend

- City Boundary
- Sphere of Influence Areas
- National Parks and Forests
- State Parks and Forests

*Source:*
*City of Corona 2017*
*County of Riverside 2017*
*County of Orange 2017*
*County of San Bernardino 2017*
*US Forest Service 2017*

Date Saved: 9/11/2018

CORONA General Plan EIR

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PLACEWORKS

# 1. Executive Summary

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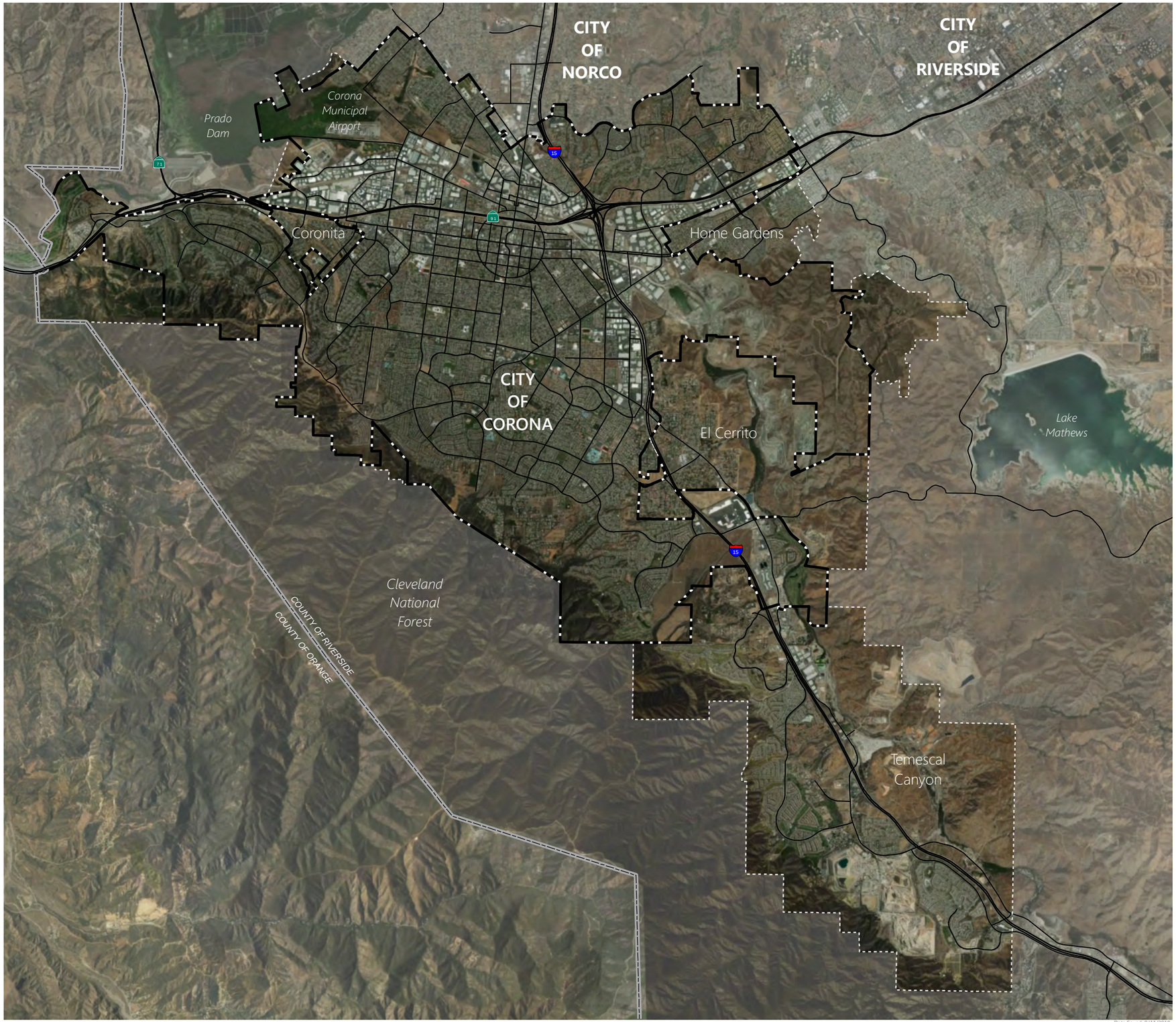


Figure ES-2

# CITYWIDE AERIAL

Legend

- City Boundary
- Sphere of Influence Areas

*Source:*
*City of Corona 2017*

CORONA General Plan EIR

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PLACEWORKS

# 1. Executive Summary

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The City is uniquely defined in Riverside County by its transportation infrastructure. Two major freeways and one railroad transect Corona. The Riverside Freeway (SR-91) runs east/west directly north of the City's center; Interstate 15 (I-15) runs north/south near the eastern edge of the City. These corridors are major transportation routes to the economic center of Orange County from the Inland Empire. In addition, the Burlington Northern Santa Fe (BNSF) railroad transects the center of the community, running parallel to the SR-91. Corona's convenient proximity to both freeways and rail infrastructure contributes to the City's growth and economic strengths; however, freeway traffic volumes are high, causing significant congestion and commuter "cut through" traffic on the city's local streets.

Two geographical areas are within the "planning area" covered by the Corona General Plan, the City's corporate limits (City) and its Sphere of Influence (SOI), which are depicted in Figure ES-3, *City of Corona Planning Area*. As defined by the City and the Riverside County Local Agency Formation Commission (LAFCO), the SOI represents the logical service area of the city. Corona includes 39 square miles, plus an additional 32 square miles within its SOI. The SOI includes three geographically distinct areas to the west, east, and south of Corona's incorporated borders:

- The West Sphere encompasses the Prado Basin, Coronita, and the Foothill area.
- The East Sphere includes the areas of Home Gardens, Eagle Valley East, and El Cerrito.
- Temescal Canyon makes up the South Sphere.

The 2040 Corona General Plan does not propose or anticipate annexation of its sphere of influence at this time. Should annexation of one or more sphere areas be considered at some future point in time, applicable procedures from the Local Agency Formation Commission (LAFCO) would apply.

Figure ES-4, *Existing Land Uses*, City of Corona shows the distribution of existing land uses within the City of Corona and SOI.

## 1.4 PROJECT SUMMARY

The proposed project is a technical update of the City of Corona's adopted General Plan and Climate Action Plan. The General Plan is a State-required legal document that provides guidance to decision-makers regarding the allocation of resources and determining the future physical form and character of development in the City and its SOI. It is the official statement of the City regarding the extent and types of development needed to achieve the community's physical, economic, social, and environmental goals. Although the General Plan is composed of individual sections, or "elements" that individually address a specific area of concern, the General Plan embodies a comprehensive and integrated planning approach for the jurisdiction.

Under State law, each City and county General Plan must contain eight mandated elements: land use, circulation, housing, conservation, open space, noise and safety, and environmental justice. These elements can be formatted in any manner within a general plan and do not need to be "stand-alone" chapters. Government Code Section 65303 also permits local jurisdictions to formulate other elements, which, in the "judgment of the planning agency," relate to the physical development of the city. These "permissive" elements are as legally

binding as a mandatory element, once adopted. The City of Corona has directed the inclusion of additional permissive elements in its General Plan as described later in this chapter.

## 1.4.1 Proposed General Plan

The proposed General Plan is a technical update of the current General Plan, with the exception of the latest updated Housing Element. The update includes the following elements that address all the required topics in state law:

- Land Use Element
- Housing Element
- Community Design Element
- Historic Resources Element
- Economic Development Element
- Parks, Recreation, Cultural Arts, & Education Element
- Circulation Element
- Infrastructure and Utilities Element
- Public Safety Element
- Noise Element
- Healthy Community Element
- Environmental Resources Element

### Comparison of Current Land Uses and Buildout

Figure ES-4, *Existing Land Uses*, illustrates existing land uses as of 2018. Figure ES-5, *Land Use Plan – City of Corona*, and Figure ES-6, *Land Use Plan – Sphere of Influence,* show the land use designations regulating development in the City and SOI, respectively. Buildout projections shown in Table ES-1 are used throughout this DEIR to estimate the magnitude of development that would likely occur in Corona and its SOI upon implementation of the General Plan Update. The table also shows the difference between potential growth and the amount of development as of 2018. Land use calculations are used to estimate the number of dwelling units, residents, square feet of nonresidential uses, and employees that would be generated by proposed land uses. These projections are then used to estimate how much noise, traffic, and other impacts would occur due to these changes.

As detailed in Table ES-1, *Buildout Statistical Summary, Corona and SOI*, General Plan Update would result in a potential buildout total of 70,939 housing units, 241,928 residents, 82,191,657 nonresidential square feet, and 106,474 jobs in the City and SOI. Compared to existing conditions, the proposed project would result in an increase of 11,511 units, 39,298 residents, 26,476,352 nonresidential square feet, and 31,156 jobs in the City and its SOI.

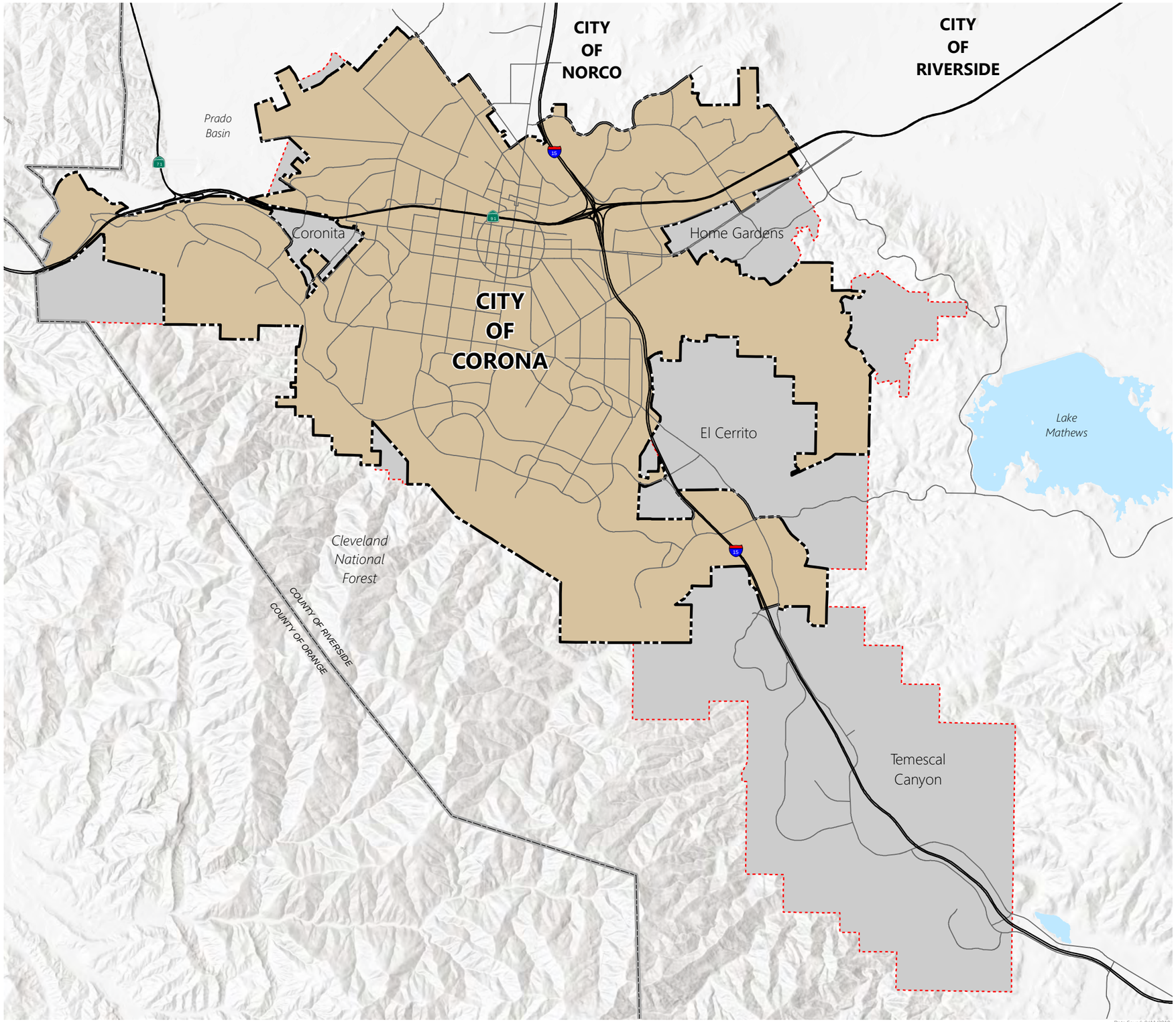


Figure ES-3

# PLANNING AREA

Legend

- City Boundary
- Sphere of Influence Areas

*Source:*
*Corona 2017*
*County of Riverside 2017*

CORONA General Plan EIR

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PLACEWORKS

# 1. Executive Summary

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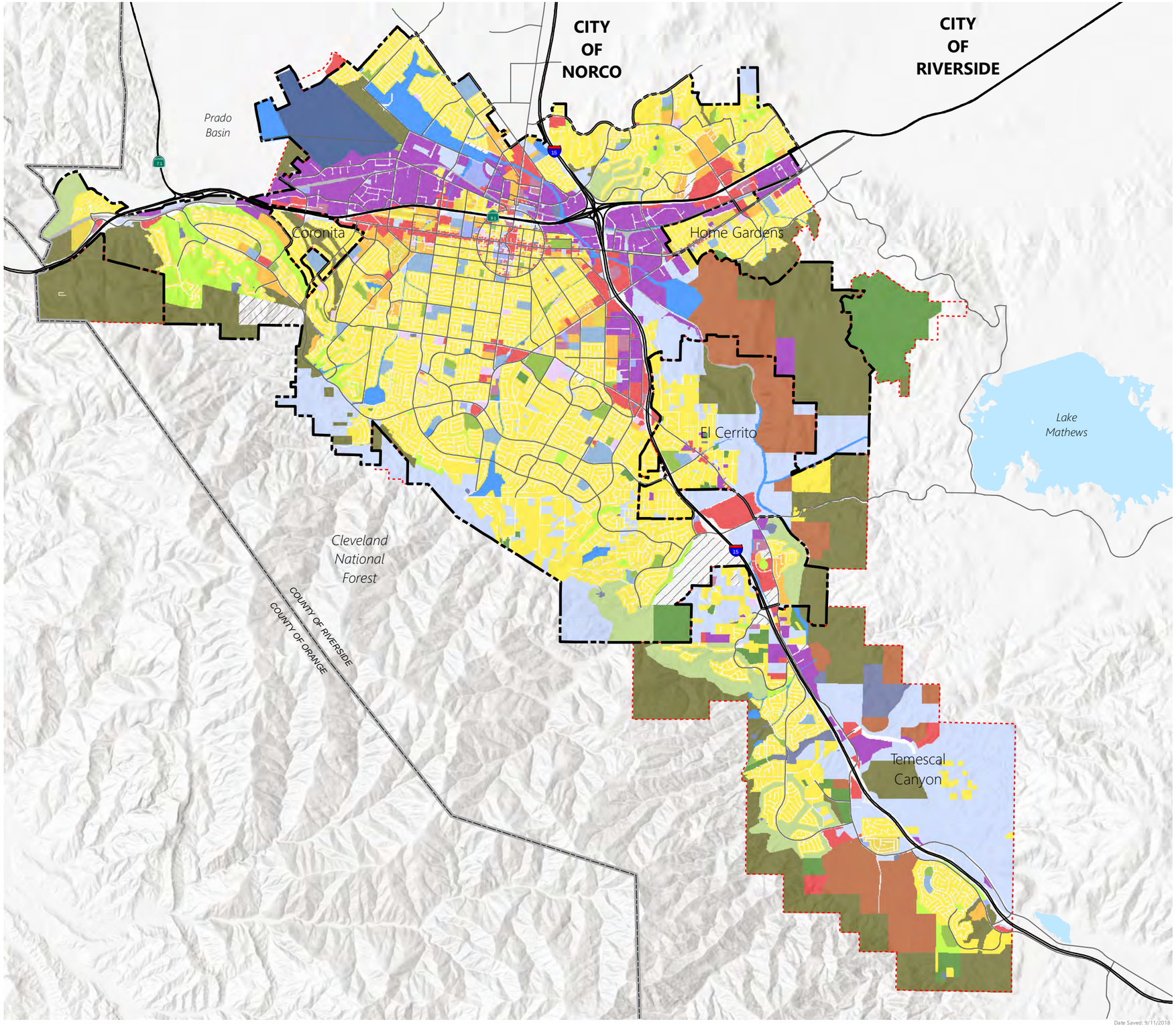
Figure ES-4

# EXISTING LAND USE




## Legend

- City Boundary
- Sphere of Influence Areas
- Single-Family Residential
- Multi-Family Residential
- Mobile Homes
- Airport
- Commercial
- Office
- Industrial
- Mining
- Educational Facilities
- Religious Facilities
- Public Facilities
- Public Open Space/ Parks
- Golf Course
- Agriculture
- Natural Open Space
- Open Space
- Rail Road
- Right-of-Way
- Under Construction
- Utility Facilities
- Vacant
- Water/Flood Control

*Source:*
*Corona 2017*
*County of Riverside 2017*

CORONA General Plan EIR

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PLACEWORKS

# 1. Executive Summary

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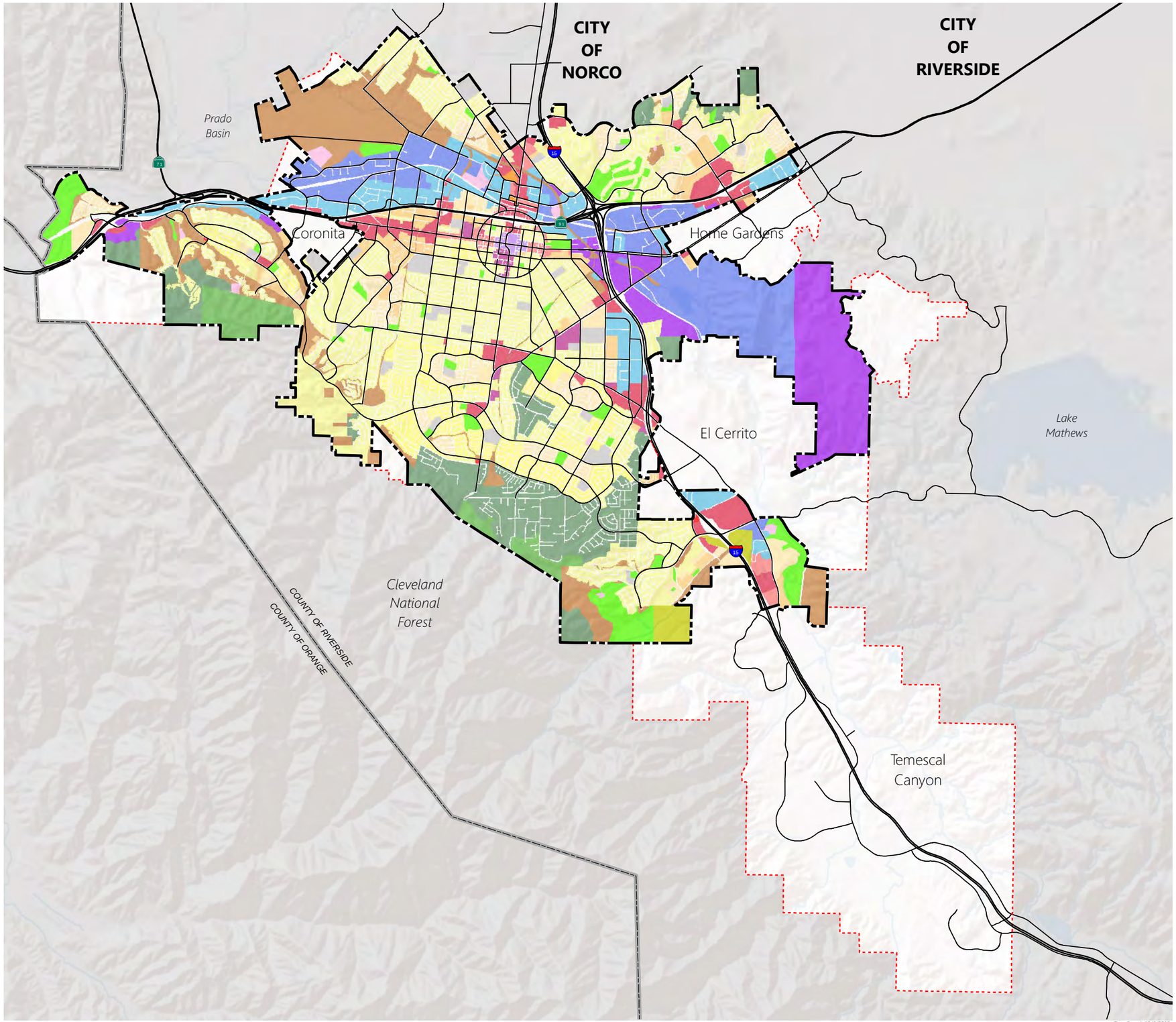


Figure ES-5

# LAND USE PLAN

## CITY OF CORONA

### Legend

- City Boundary
- Sphere of Influence Areas
- Agriculture (AG)
- Estate Residential (ER)
- Rural Residential (RR 2)
- Low Density Residential (LDR)
- Low Medium Density Residential (LMDR)
- Medium Density Residential (MDR)
- High Density Residential (HDR)
- Urban Density Residential (UDR)
- General Commercial (GC)
- Office Professional (OP)
- Mixed Use Downtown (MUD)
- Mixed Use: Commercial/Residential (MU 1)
- Mixed Use: Industrial/Commercial (MU 2)
- Light Industrial (LI)
- General Industrial (GI)
- Parks, Open Space Recreational (P, OS/R)
- Open Space General (OS, OS/G)
- School (S)
- Fire Station (FS)
- Utility (U)

*Source:*
*City of Corona 2017*

CORONA General Plan EIR

Miles
0 0.5 1 1.5 2

PLACEWORKS

# 1. Executive Summary

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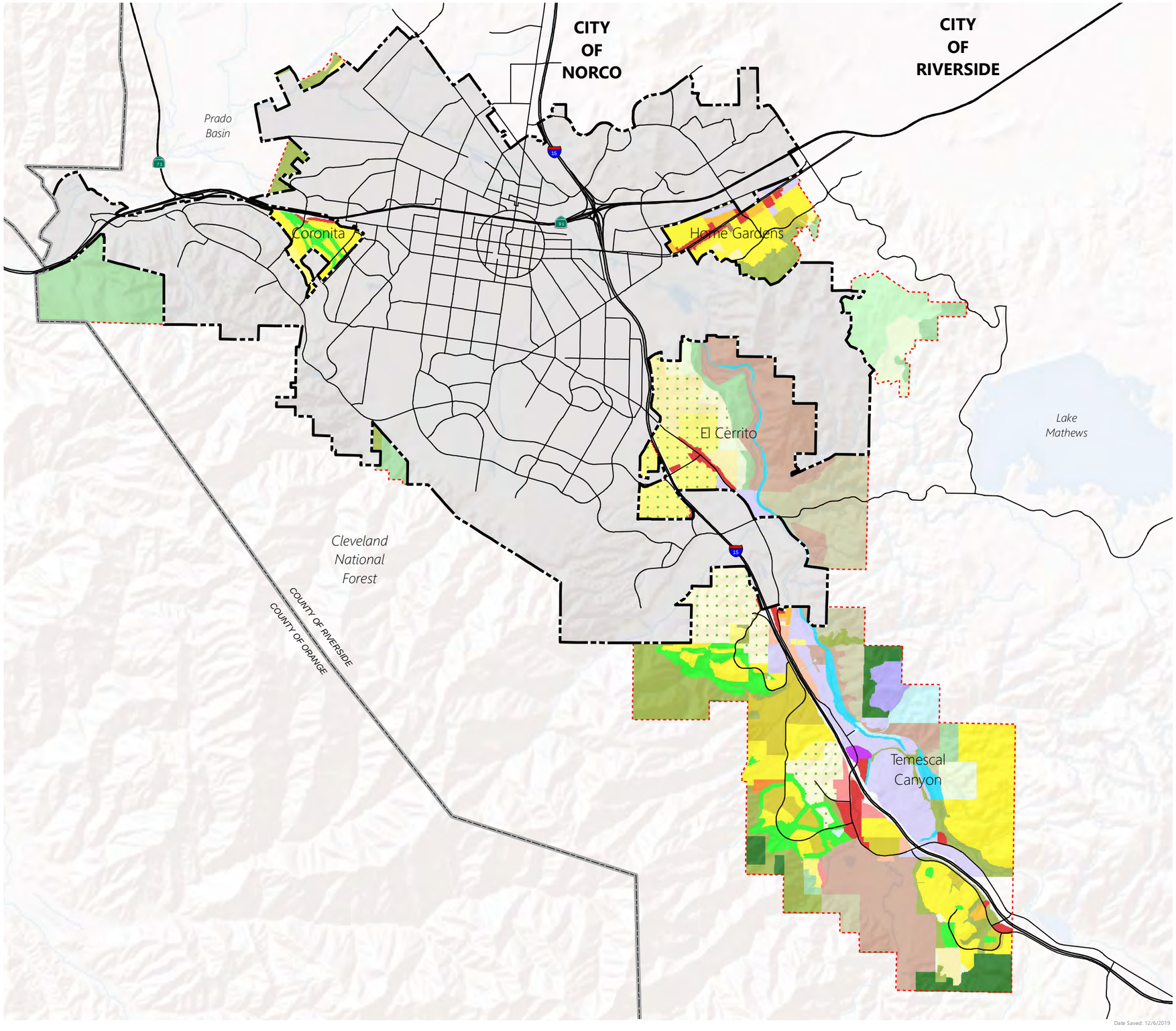


Figure ES-6

# LAND USE PLAN

## SPHERE OF INFLUENCE AREAS

### Legend

- City Boundary
- Sphere of Influence Areas
- Rural Community - Estate Density Residential
- Rural Community - Very Low Density Residential
- Rural Community - Low Density Residential
- Estate Density Residential
- Very Low Density Residential
- Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Very High Density Residential
- Highest Density Residential
- Commercial Retail
- Commercial Tourist
- Commercial Office
- Community Center
- Light Industrial
- Heavy Industrial
- Business Park
- Public Facilities
- Rural Residential
- Rural Mountainous
- Agriculture
- Conservation
- Conservation Habitat
- Open Space Recreation
- Open Space Rural
- Water
- Mineral Resources
- City

*Source:*
*Riverside County 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

# 1. Executive Summary

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Table ES-1 Buildout Statistical Summary, Corona and SOI

| Scenario | Acres | Units | Households | Population | Nonresidential Square Feet | Employment |
|---|---|---|---|---|---|---|
| Existing Conditions (2018) | | | | | | |
| City | 25,551 | 48,532 | 46,979 | 165,366 | 52,278,846 | 70,972 |
| SOI | 16,515 | 10,896 | 10,351 | 37,264 | 3,436,459 | 4,346 |
| Total | 42,066 | 59,428 | 57,330 | 202,630 | 55,715,305 | 75,318 |
| Proposed General Plan (2040) | | | | | | |
| City | 25,551 | 54,026 | 52,297 | 184,086 | 61,794,650 | 84,395 |
| SOI | 16,515 | 16,913 | 16,067 | 57,842 | 20,397,007 | 22,079 |
| Total | 42,066 | 70,939 | 68,364 | 241,928 | 82,191,657 | 106,474 |
| Difference | | | | | | |
| City | 0 | 5,494 | 5,318 | 18,720 | 9,515,804 | 13,423 |
| SOI | 0 | 6,017 | 5,716 | 20,578 | 16,960,548 | 17,733 |
| Total | 0 | 11,511 | 11,034 | 39,298 | 26,476,352 | 31,156 |

## 1.4.2 Proposed Climate Action Plan

The City of Corona is also proposing to update the City's Climate Action Plan (CAP). The CAP covers greenhouse gas (GHG) emissions and emissions reductions within the incorporated City of Corona and is included in Appendix C of this Draft EIR. The CAP identifies GHG reduction measures that allow the City to continue reductions consistent with the State's interim emissions reduction goal of lowering emissions 40 percent below 1990 levels by 2030 under Senate Bill 32 (SB 32) and long-term goal of 80 percent below 1990 levels by 2050 under Executive Order S-03-05. A straight-line projection from the 2030 to 2050 goals would result in a reduction goal of 66 percent below 2008 levels by 2040 midpoint, which corresponds to the General Plan horizon.

The CAP update focuses on developing reduction strategies toward achieving the 2030 and interim 2040 reduction goals. A summary of the CAP Reduction Measures is shown in Table ES-2, *City of Corona Climate Action Plan Reduction Measures*.

Table ES-2 City of Corona Climate Action Plan Reduction Measures

| Goal | Measure |
|---|---|
| Goal 1: Increase Energy Efficiency in Existing Residential Units | 1.1: Energy Efficiency Training, Education, and Recognition in the Residential Sector |
| | 1.2: Increase Community Participation in Existing Energy Efficiency Programs |
| | 1.3: Home Energy Evaluations |
| | 1.4: Residential Home Energy Renovations |
| Goal 2: Increase Energy Efficiency in New Residential Units | 2.1: Exceed Energy Efficiency Standards |
| Goal 3: Increase Energy Efficiency in Existing Commercial Units | 3.1: Energy Efficiency Training, Education, and Recognition in Commercial Sector |
| | 3.2: Increase Business Participation in Existing Energy Efficiency Programs |
| | 3.3: Nonresidential Building Energy Audits |
| | 3.4: Nonresidential Building Retrofits |
| Goal 4: Increase Energy Efficiency in New Commercial Units | 4.1: Exceed Energy Efficiency Standards |
| Goal 5: Increase Energy Efficiency through Water Efficiency | 5.1: Water Efficiency through Enhanced Implementation of Senate Bill X7-7 |
| | 5.2: Exceed Water Efficiency Standards |
| Goal 6: Decrease Energy Demand through Reducing Urban Heat Island Effect per Title 24 Requirements | 6.1: Tree Planting for Shading and Energy Saving |
| | 6.2: Light-Reflecting Surfaces for Energy Saving |
| Goal 7: Decrease Greenhouse Gas Emissions through Reducing Vehicle Miles Traveled | 7.1: Alternative Transportation Options |
| | 7.2: Implement Bicycle Master Plan to Expand Bike Routes around the Corona |
| Goal 8: Decrease Greenhouse Gas Emissions through Reducing Solid Waste Generation | 8.1: Reduce Waste to Landfills |
| Goal 9: Decrease Greenhouse Gas Emissions through Increasing Clean Energy Use | 9.1: Clean Energy |
| | 9.2: Join Community Choice Aggregate (CCA) Program |

Source: LSA 2019

## 1.5 SUMMARY OF PROJECT ALTERNATIVES

The CEQA Guidelines (§ 15126.6[a]) state that an EIR must address "a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." The alternatives in this DEIR were based, in part, on their potential ability to reduce or eliminate the impacts determined to be significant and unavoidable for implementation of the proposed project. Project alternatives are assessed in further detail in Chapter 7, *Alternatives to the Proposed Project*.

### 1.5.1 No Project/Existing General Plan Alternative

In the No Project/Existing General Plan Alternative, the General Plan Update would not be implemented by the City. The current General Plan would remain in effect. Land use designations, intensities, and densities of the proposed project would remain unchanged, in comparison to the existing General Plan; the General Plan Update would update the Land Use Plan with General Plan Amendments that have been approved since 2004.

The primary difference between the proposed General Plan and the No Project/Existing General Plan Alternative (i.e., the current General Plan) are the proposed policies. Under the No Project/Existing General Plan Alternative, these changes would not occur:

- Circulation Element Policies to address the Complete Streets Act
- Changes to the Roadway Plan
- 6th Street 'Road Diet'
- Roadway classification changes
- Public Safety Element Policies (including climate change adaptation and vulnerability assessment, wildfire, and airport land use compatibility)
- Healthy Communities Element Policies (including environmental justice)
- Parks, Recreation, Cultural Arts, & Education Element Policies (addresses new trails)
- Infrastructure Element Policies (reclaimed water goals)
- Community Design Element Policies (designates the New Foothill Corridor as a Local Scenic Corridor)

The proposed project also includes changes to the circulation network to provide a 'road diet' on 6th Street, which reduces the number of lanes on 6th Street from four to two in the proposed project. Under the proposed project vehicles are selecting a slightly longer path of travel given the lane reduction in capacity on 6th Street. As a result, this alternative results in a slight (<1 percent) decrease in total VMT but the same VMT per service population (SP) as the proposed project.

#### 1.5.1.1 ABILITY TO REDUCE ENVIRONMENTAL IMPACTS

Impacts of the No Project/Existing General Plan alternative would be similar for aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, noise public services, recreation, tribal cultural resources, and utilities and service systems. Impacts would be greater for energy and GHG emissions. This alternative would eliminate the proposed project's cumulative VMT impact on transportation and lessen project-level VMT impacts caused by a slight increase in VMT associated with the updated Roadway Plan.

#### 1.5.1.2 ABILITY TO ACHIEVE PROJECT OBJECTIVES

The No Project/Existing General Plan Alternative would meet all of the project objectives; however, this alternative would not implement the proposed General Plan Update policies, which are designed to further enhance the project objectives, compared to the existing General Plan.

### 1.5.2 Transit Oriented Development Alternative

The Transit Oriented Development Alternative would increase land use intensity within a quarter mile of existing transit stops near downtown Corona, including the North Main Metrolink and areas served by the Corona Cruiser up to 60 dwelling units per acre. The Metrolink runs east-west through Home Gardens and Corona. The Corona Cruiser operates a blue line and red line route throughout the City.

The North Main Metrolink Station is at 250 East Blaine Street. While 24 percent of this area allows mixed-use development, the remainder of this area is designated primary for General Commercial use, Light Industrial, and General Industrial use. This alternative would redesignate the entire area within a quarter mile of the North Main Metrolink Station to allow residential up to 60 dwelling units per acre.

This alternative would result in 2,113 additional residential units and 7,200 people within the City. Additionally, the redesignation would result in a loss of approximately 260,220 square feet non-residential uses and 285 less employees compared to the proposed project. As a result, this alternative results in a slight (2 percent) increase in total VMT but a slight (<1 percent) decrease in total VMT/SP—a measure of a project's land use efficiency—compared the proposed project.

#### 1.5.2.1 ABILITY TO REDUCE ENVIRONMENTAL IMPACTS

Impacts of this alternative would be similar for aesthetics, agriculture and forestry resources, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, tribal cultural resources, and wildfire. Impacts would be greater for air quality, energy, public services, recreation, and utilities and service systems. Impacts to GHG emissions and transportation would be less than the proposed project.

#### 1.5.2.2 ABILITY TO ACHIEVE PROJECT OBJECTIVES

The Transit Oriented Development Alternative would meet all of the project objectives to the same extent as the proposed project.

The Transit Oriented Development Alternative has been identified as the environmentally superior alternative.

## 1.6 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the lead agency as to:

1. Whether this DEIR adequately describes the environmental impacts of the project.
2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether the proposed land use changes are compatible with the character of the existing area.

4. Whether the identified goals, policies, or mitigation measures should be adopted or modified.

5. Whether there are other mitigation measures that should be applied to the project besides the Mitigation Measures identified in the DEIR.

6. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

## 1.7 AREAS OF CONTROVERSY

In accordance with Section 15123(b)(2) of the CEQA Guidelines, the EIR summary must identify areas of controversy known to the lead agency, including issues raised by agencies and the public. The City of Corona has no knowledge of expressed opposition to the proposed project. Prior to preparation of the DEIR, a public scoping meeting was held on August 30, 2018, to determine the concerns of responsible and trustee agencies and the community regarding the proposed project. The scoping meeting was held at the City of Corona and identified concerns with to traffic, recreational access, and aircraft noise In addition, Notice of Preparation (NOP) comment letters received during the review period are summarized in Chapter 2, *Introduction* (see Table 2-1, *NOP Comment Summary*).

## 1.8 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table ES-3 summarizes the conclusions of the environmental analysis contained in this EIR. Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance after imposition of the mitigation measures is also presented.

# 1. Executive Summary

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Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| 5.1 AESTHETICS | | | |
| Impact 5.1-1: Development in accordance with the General Plan Update would not substantially alter or damage scenic vistas or resources or degrade views along a state scenic highway. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.1-2: Buildout in accordance with the proposed land use plan would alter the existing visual appearance of the City and SOI, but would not substantially degrade its existing visual character or quality. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.1-3: Future development in accordance with the General Plan Update would generate additional light and glare in the City and SOI that would impact surrounding existing land uses; however, light and glare would be minimized through adherence to the City's lighting standards. | Less Than Significant | No mitigation is required. | Less Than Significant |
| 5.2 AGRICULTURE AND FORESTRY RESOURCES | | | |
| Impact 5.2-1: Development of the proposed project would convert Farmland to non-agricultural use. | Significant | No feasible mitigation measures were identified. | Significant and Unavoidable |
| Impact 5.2-2: Development of the proposed project in the SOI would convert Williamson Act contract land to non-agricultural use. | Significant | No feasible mitigation measures were identified. | Significant and Unavoidable |
| Impact 5.2-3: The proposed project would not rezone forestland or timberland, nor would the proposed project result in the loss or conversion of forestland to non-forest uses | Less Than Significant | No mitigation is required. | Less Than Significant |

# 1. Executive Summary

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| 5.3 AIR QUALITY | | | |
| Impact 5.3-1: The additional population growth forecasted for the General Plan Update and the associated emissions would not be consistent with the assumptions of the Air Quality Management Plan. | Significant | See the mitigation measures outlined for Impacts 5.3-2 and 5.3-3. | Significant and Unavoidable |
| Impact 5.3-2: Construction activities associated with future development that would be accommodated under the General Plan Update could generate short-term emissions in exceedance of SCAQMD'S threshold criteria. | Significant | AQ-1 Prior to discretionary approval by the City of Corona for development projects subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects), project applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the City of Corona Planning Division for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology for assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the SCAQMD-adopted thresholds of significance, the City of Corona shall require that applicants for new development projects incorporate mitigation measures 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's Planning Division. Mitigation measures to reduce construction-related emissions could include, but are not limited to:<br>• Requiring fugitive-dust control measures that exceed SCAQMD's Rule 403, such as:<br>• Use of nontoxic soil stabilizers to reduce wind erosion.<br>• Applying water every four hours to active soil-disturbing activities.<br>• Tarping and/or maintaining a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials.<br>• Using construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower. | Significant and Unavoidable |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | | Level of Significance After Mitigation |
|---|---|---|---|---|
| | | | • Ensuring that construction equipment is properly serviced and maintained to the manufacturer's standards.<br>• Limiting nonessential idling of construction equipment to no more than five consecutive minutes.<br>• Limiting onsite vehicle travel speeds on unpaved roads to 15 miles per hour.<br>• Installing wheel washers for all exiting trucks or wash off all trucks and equipment leaving the project area.<br>• Using 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 at http://www.aqmd.gov/docs/default-source/planning/architectural-coatings/super-compliant-manf-list.pdf?sfvrsn=71.. | |
| Impact 5.3-3: Implementation of the General Plan Update would generate long-term emissions in exceedance of SCAQMD's threshold criteria. | Significant | AQ-2 | Prior to discretionary approval by the City of Corona for development projects subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects), project applicants shall prepare and submit a technical assessment evaluating potential project operation phase-related air quality impacts to the City of Corona Planning Division for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the SCAQMD-adopted thresholds of significance, the City of Corona Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following:<br>• For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plug-in of the anticipated number of refrigerated trailers to reduce idling time and emissions. | Significant and Unavoidable |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | • Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in appropriate applications to optimize renewable energy generation systems and avoid peak energy use.<br>• Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with California Air Resources Board Rule 2845 (13 CCR Chapter 10 § 2485).<br>• Provide changing/shower facilities as specified in Section A5.106.4.3 of the CALGreen Code (Nonresidential Voluntary Measures).<br>• Provide bicycle parking facilities per Section A4.106.9 (Residential Voluntary Measures) of the CALGreen Code.<br>• Provide preferential parking spaces for low-emitting, fuel-efficient, and carpool/van vehicles per Section A5.106.5.1 of the CALGreen Code (Nonresidential Voluntary Measures).<br>• Provide facilities to support electric charging stations per Section A5.106.5.3 (Nonresidential Voluntary Measures) and Section A5.106.8.2 (Residential Voluntary Measures) of the CALGreen Code.<br>• Applicant-provided appliances shall be Energy Star-certified appliances or appliances of equivalent energy efficiency (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star-certified or equivalent appliances shall be verified by Building & Safety during plan check.<br>• Applicants for future development projects along existing and planned transit routes shall coordinate with the City of Corona and Riverside Transit to ensure that bus pad and shelter improvements are incorporated, as appropriate. | |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | | Level of Significance After Mitigation |
|---|---|---|---|---|
| Impact 5.3-4: Operation of industrial and warehousing land uses accommodated under the General Plan Update could expose sensitive receptors to substantial toxic air contaminant concentrations. | Significant | AQ-3 | Prior to discretionary approval by the City of Corona, project applicants for new industrial or warehousing development projects that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, or nursing homes), as measured from the property line of the project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City of Corona Planning Division for review and approval. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment and the South Coast Air Quality Management District. If the HRA shows that the incremental cancer risk and/or noncancer hazard index exceeds the respective thresholds, as established by the SCAQMD at the time a project is considered, the project applicant will be required to identify and demonstrate that best available control technologies for toxics (T-BACTs), including appropriate enforcement mechanisms, are capable of reducing potential cancer and noncancer risks to an acceptable level. T-BACTs may include, but are not limited to, restricting idling onsite or electrifying warehousing docks to reduce diesel particulate matter, or requiring use of newer equipment and/or vehicles. T-BACTs identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan. | Significant and Unavoidable |
| Impact 5.3-5: Development and operation of land uses accommodated by the General Plan Update could generate emissions that exceed the LSTs and expose sensitive receptors to substantial criteria air pollutant concentrations. | Significant | Mitigation Measures AQ-1 and AQ-2 would also be applicable in reducing construction and operation-related localized significance thresholds (LST) impacts. | | Significant and Unavoidable |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|---|
| Impact 5.3-6: Industrial land uses accommodated under the General Plan Update could create other emissions, such as those leading to objectionable odors, that would adversely affect a substantial number of people. | Significant | AQ-4 | Prior to discretionary approval by the City of Corona, if it is determined that a development project has the potential to emit nuisance odors beyond the property line, an odor management plan shall be prepared by the project applicant and submitted to the City of Corona Planning Division for review and approval. Facilities that have the potential to generate nuisance odors include, but are not limited to:<br>• Wastewater treatment plants<br>• Composting, green waste, or recycling facilities<br>• Fiberglass manufacturing facilities<br>• Painting/coating operations<br>• Large-capacity coffee roasters<br>• Food-processing facilities<br>The odor management plan shall demonstrate compliance with the South Coast Air Quality Management District's Rule 402 for nuisance odors. The Odor Management Plan shall identify the best available control technologies for toxics (T-BACTs) that will be utilized to reduce potential odors to acceptable levels, including appropriate enforcement mechanisms. T-BACTs may include but are not limited to scrubbers (i.e., air pollution control devices) at the industrial facility. T-BACTs identified in the odor management plan shall be identified as mitigation measures in the environmental document prepared for the development project and/or incorporated into the project's site plan. | Less Than Significant |
| 5.4 BIOLOGICAL RESOURCES | | | | |
| Impact 5.4-1: Buildout of the proposed Land Use Plan could impact sensitive species plant and animal species known to occur in the City of Corona | Significant | BIO-1 | Applicants for future development projects shall include a biological resources survey. The biological resources survey shall be conducted by a qualified biologist. The biological resources survey shall include, but not be limited to:<br>• An analysis of available literature and biological databases, such as the California Natural Diversity Database, to determine sensitive biological resources that have been reported historically from the proposed development project vicinity. | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | • A review of current land use and land ownership within the proposed development project vicinity.<br>• An assessment and mapping of vegetation communities present within the proposed development project vicinity.<br>• An evaluation of potential local and regional wildlife movement corridors.<br>• A general assessment of potential jurisdictional areas, including wetlands and riparian habitats.<br><br>Habitat Assessment. If the proposed development project site supports vegetation communities that may provide habitat for plant or wildlife 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. Adjoining properties should also be surveyed where direct or indirect project effects, such as those from fuel modification or herbicide application, could potentially extend off-site. If feasible, the habitat assessment should be conducted during nondrought years. Vegetation communities should be classified and mapped to the alliance or association level using classification methods and membership rules according to *A Manual of California Vegetation*, 2nd edition (2009).<br><br>Focused Surveys. 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. The focused survey shall record the location and boundary of special status species by use of global positioning system (GPS). The number of individuals in each special status plant population shall be provided as counted (if population is small) or estimated (if population is large). If applicable, information about the percentage of individuals in each life stage, such as seedlings vs. reproductive individuals, should be provided. If feasible, images of the target species and representative habitats should be included to support information and descriptions. | |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | | Level of Significance After Mitigation |
|---|---|---|---|---|
| | | | Preconstruction Surveys. If construction activities are not initiated immediately after focused surveys have been completed, additional preconstruction special status species surveys may be required to ensure impacts are avoided or minimized to the extent feasible. If preconstruction 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.<br><br>Biological Resources Report. The results of the biological survey for proposed development projects with no significant impacts may be presented in a biological survey letter report. For proposed development projects with significant impacts that require mitigation to reduce the impacts to below a level of significance, the results of the biological survey shall be presented in a biological technical report. | |
| | | BIO-2 | 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 sensitive resources to be avoided. | |
| | | BIO-3 | 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. | |
| | | BIO-4 | 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 | |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | 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. | |
| Impact 5.4-2: Implementation of the proposed General Plan Update could impact sensitive natural communities, including wetlands and riparian habitat. | Significant | Mitigation Measures BIO-1 through BIO-4 are applicable to Impact 5.4-2. | Less Than Significant |
| Impact 5.4-3: Buildout of the proposed project could impact undetermined amounts of wetlands and jurisdictional waters regulated by the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Santa Ana Regional Water Quality Control Board. | Significant | BIO-5 The City of Corona shall require applicants of development project that have the potential to affect jurisdictional resources to contract with a qualified biologist to conduct a jurisdictional delineation following the methods outlined in the 1987 USACE *Wetland Delineation Manual* and the *Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region* (USACE 2008) to map the extent of wetlands and nonwetland waters, determine jurisdiction, and assess potential impacts. The results of the delineation shall be presented in a wetland delineation report and shall be incorporated into the CEQA document(s) required for approval and permitting of the proposed development project.<br><br>Applicants of development projects that have the potential to impact jurisdictional features, as identified in the wetland delineation letter report, shall obtain permits and authorizations from the Army Corps of Engineers, California Department of Fish and Wildlife, and/or Santa Ana Regional Water Quality Control Board. The regulatory agency authorization(s) would include impact avoidance and minimization measures as well as mitigation measures for unavoidable impacts. Specific avoidance, minimization, and mitigation measures for impacts to jurisdictional resources shall be determined through discussions with the regulatory agencies during the proposed development project permitting process and may include monetary contributions to a mitigation bank or habitat creation, restoration, or enhancement. | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|---|
| Impact 5.4-4: Development pursuant to the proposed General Plan Update could adversely impact wildlife movement in the Bedford Wash to Lake Mathews Estelle Mountain Reserve Corridor. | Significant | BIO-6 | The City of Corona shall require a habitat connectivity/wildlife corridor evaluation for future development projects that may impact existing connectivity areas and wildlife linkages identified in Figure 5.4-7, *Potential Wildlife Movement Corridors*, of the Draft EIR, which includes the Bedford Wash to Lake Mathews Estelle Mountain Reserve Corridor. The results of the evaluation shall be incorporated into the project's biological report required under Mitigation Measure BIO-1. The evaluation shall also identify project design features that would reduce potential impacts and maintain habitat and wildlife movement. To this end, the City shall incorporate the following measures, to the extent practicable, for projects impacting wildlife movement corridors:<br>• Adhere to low density zoning standards.<br>• Encourage clustering of development.<br>• Avoid known sensitive biological resources.<br>• Provide shielded lighting adjacent to sensitive habitat areas.<br>• Encourage development plans that maximize wildlife movement.<br>• Provide buffers between development and wetland/riparian areas.<br>• Protect wetland/riparian areas through regulatory agency permitting process.<br>• Encourage wildlife-passable fence designs (e.g., 3-strand barbless wire fence) on property boundaries.<br>• Encourage preservation of native habitat on the undeveloped remainder of developed parcels.<br>• Minimize road/driveway development to help prevent loss of habitat due to roadkill and habitat loss.<br>• Use native, drought-resistant plant species in landscape design.<br>• Encourage participation in local/regional recreational trail design efforts. | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | | Level of Significance After Mitigation |
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| Impact 5.4-5: Migratory birds known to occur within the City of Corona and SOI would be protected under the Migratory Bird Treaty Act | Significant | BIO-7 | The City of Corona shall require applicants for future development projects to contract with a qualified biologist to conduct a preconstruction general nesting bird survey within all suitable nesting habitats that may be impacted by active construction during general avian breeding season (February 1 through August 31). The preconstruction surveys shall be conducted no more than 7 days prior to initiation of construction. If no active avian nests are identified within the proposed development project area or within a 300-foot buffer of the proposed development project area, no further mitigation is necessary. If active nests of avian species covered by the Fish and Game Code are detected within the proposed development project area or within a 300-foot buffer of the proposed development project area, construction shall be halted until the young have fledged, until a qualified biologist has determined the nest is inactive, or until appropriate mitigation measures that respond to the specific situation have been developed and implemented in consultation with the regulatory agencies. Based on the discretion of the qualified biologist, the 300-foot buffer may be expanded as appropriate to the species. | Less Than Significant |
| Impact 5.4-6: Future projects in accordance with the General Plan Update would be required to comply with the Western Riverside Multi-Species Habitat Conservation Plan, the Stephen's Kangaroo Rat Habitat Conservation Plan, and Corona's local biological resources policies and ordinances | Less Than Significant | No mitigation is required. | | Less Than Significant |
| 5.5 CULTURAL RESOURCES | | | | |
| Impact 5.5-1: Buildout of the City of Corona General Plan could impact historic resources | Significant | CUL-1 | Prior to any construction activities that may affect historical resources (i.e., structures 45 years or older), a historical resources assessment shall be performed by an architectural historian or historian who meets the Secretary of the Interior's Professionally Qualified Standards (PQS) in architectural history or history. This shall include a records search to determine if any resources that may be potentially affected by the project have been previously recorded, evaluated, and/or designated in the National Register of Historic Places (NRHP), California Register of Historic Resources (CRHR), or Corona Register of Historic Resources. Following the records search, the qualified | Significant and Unavoidable |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | | Level of Significance After Mitigation |
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| | | | architectural historian or historian shall conduct a reconnaissance-level and/or intensive-level survey in accordance with the California Office of Historic Preservation (OHP) guidelines to identify any previously unrecorded potential historical resources that may be potentially affected by the proposed project. Pursuant to the definition of a historical resource under CEQA, potential historical resources shall be evaluated under a developed historic context. | |
| | | CUL-2 | To ensure that projects requiring the relocation, rehabilitation, or alteration of a historical resource not impair its significance, the *Secretary of the Interior's Standards for the Treatments of Historic Properties* shall be used to the maximum extent possible. The application of the standards shall be overseen by a qualified architectural historian or historic architect meeting the PQS. Prior to any construction activities that may affect the historical resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City of Corona. | |
| | | CUL-3 | If a proposed project would result in the demolition or significant alteration of a historical resource, it cannot be mitigated to a less than significant level. However, recordation of the resource prior to construction activities will assist in reducing adverse impacts to the resource to the greatest extent possible. Recordation shall take the form of Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) documentation, and shall be performed by an architectural historian or historian who meets the PQS. Documentation shall include an architectural and historical narrative; medium- or large-format black and white photographs, negatives, and prints; and supplementary information such as building plans and elevations, and/or historic photographs. Documentation shall be reproduced on archival paper and placed in appropriate local, state, or federal institutions. The specific scope and details of documentation would be developed at the project level. | |
| | | CUL-4 | If cultural resources that are eligible for listing to the NRHP, CRHR, or Corona Register of Historic Resources are identified within or adjacent to the proposed development, the construction limits shall be clearly flagged to assure impacts to eligible cultural resources are avoided or minimized to the extent feasible. Prior to implementing construction activities, a qualified | |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | | Mitigation Measures | Level of Significance After Mitigation |
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| | | | archaeologist shall verify that the flagging clearly delineates the construction limits and eligible resources to be avoided. Since the location of some eligible cultural resources is confidential, these resources will be flagged as environmentally sensitive areas (ESA). | |
| Impact 5.5-2: Future development in the City that would be accommodated by the General Plan Update could impact known and unknown archaeological resources. | Significant | CUL-5 | To determine the archaeological sensitivity for discretionary projects within the City, an archaeological resources assessments shall be performed under the supervision of an archaeologist that meets the Secretary of the Interior's Professionally Qualified Standards (PQS) in either prehistoric or historic archaeology. The assessments shall include a California Historical Resources Information System (CHRIS) records search and a search of the Sacred Lands File (SLF) maintained by the Native American Heritage Commission (NAHC). The records searches shall determine if the proposed project has been previously surveyed for archaeological resources, identify and characterize the results of previous cultural resource surveys, and disclose any cultural resources that have been recorded and/or evaluated. A Phase I pedestrian survey shall be undertaken in areas that are undeveloped to locate any surface cultural materials.<br><br>a. If potentially significant archaeological resources are identified through an archaeological resources assessment, and impacts to these resources cannot be avoided, a Phase II Testing and Evaluation investigation shall be performed by an archaeologist who meets the PQS prior to any construction-related ground-disturbing activities to determine significance. If resources determined significant or unique through Phase II testing, and site avoidance is not possible, appropriate site-specific mitigation measures shall be established and undertaken. These might include a Phase III data recovery program that would be implemented by a qualified archaeologist and shall be performed in accordance with the Office of Historic Preservation's *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (1990) and *Guidelines for Archaeological Research Designs* (1991). | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | b. If the archaeological assessment did not identify potentially significant archaeological resources within the proposed General Plan area but indicated the area to be highly sensitive for archaeological resources, a qualified archaeologist shall monitor all ground-disturbing construction and pre-construction activities in areas with previously undisturbed soil. The archaeologist shall inform all construction personnel prior to construction activities of the proper procedures in the event of an archaeological discovery. The training shall be held in conjunction with the project's initial on-site safety meeting, and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the resources are evaluated for significance by an archaeologist who meets the PQS. If the discovery proves to be significant, it shall be curated with a recognized scientific or educational repository.<br><br>c. If the archaeological assessment did not identify potentially significant archaeological resources, but indicates the area to be of medium sensitivity for archaeological resources, an archaeologist who meets the PQS shall be retained on an on-call basis. The archaeologist shall inform all construction personnel prior to construction activities about the proper procedures in the event of an archaeological discovery. The training shall be held in conjunction with the project's initial on-site safety meeting, and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the on-call archaeologist is contacted. If the discovery proves to be significant, it shall be curated with a recognized scientific or educational repository. | |
| Impact 5.5-3: Grading activities could potentially disturb human remains | Less Than Significant | No mitigation is required. | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
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| 5.6 ENERGY | | | |
| Impact 5.6-1: Implementation of the proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.6-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency | Less Than Significant | No mitigation is required. | Less Than Significant |
| 5.7 GEOLOGY AND SOILS | | | |
| Impact 5.7-1: The General Plan Update would not subject people and structures in Corona to seismic-related hazards | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.7-2: Unstable geologic unit or soils conditions, including soil erosion, would not result due to implementation of the General Plan Update | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.7-3: Soil conditions would not result in risks to life or property. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.7-4: Future development in the City of Corona would require connection to the City's sewer system | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.7-5: Future development in the City and SOI that would be accommodated by the General Plan Update could impact known and unknown paleontological resources. | Significant | GEO-1 High and Low-to-High Sensitivity. In areas designated as having "high" or "low-to-high" sensitivity for paleontological resources, the project applicant shall be required to submit a Paleontological Resources Monitoring and Mitigation Plan (PRMMP). The PRMMP shall be prepared by a Qualified Paleontologist meeting the standards of Society of Vertebrate Paleontology (2010). The plan shall address specifics of monitoring and mitigation based on the project area and project's construction plan, and shall take into account updated geologic mapping, geotechnical data, updated paleontological records searches, and changes to the regulatory framework at the time of | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | | Level of Significance After Mitigation |
|---|---|---|---|---|
| | | | analysis. The PRMMP shall be submitted to the City of Corona's Community Development Department prior to approval of a grading permit. | |
| | | GEO-2 | High Sensitivity. Projects involving ground disturbances in previously undisturbed areas mapped as having "high" paleontological sensitivity shall be monitored by a qualified paleontological monitor on a full-time basis, under the supervision of the Qualified Paleontologist. Monitoring shall include inspection of exposed sedimentary units during active excavations within sensitive geologic sediments. The monitor shall have authority to temporarily divert activity away from exposed fossils to evaluate the significance of the find and, if the fossils are determined to be significant, professionally and efficiently recover the fossil specimens and collect associated data. The paleontological monitor shall use field data forms to record pertinent location and geologic data, measure stratigraphic sections (if applicable), and collect appropriate sediment samples from any fossil localities. | |
| | | GEO-3 | Low-to-High Sensitivity. Projects involving ground disturbance in previously undisturbed areas mapped with "low-to-high" paleontological sensitivity shall require monitoring if construction activity exceeds the depth of the low-sensitivity surficial sediments. The underlying sediments may have high sensitivity; therefore, work in those units shall require paleontological monitoring, as designated by the Qualified Paleontologist in the Paleontological Resources Monitoring and Mitigation Plan (PRMMP). | |
| | | GEO-4 | Low Sensitivity. Projects involving ground disturbance in previously undisturbed areas mapped as having "low" paleontological sensitivity shall incorporate worker training to make construction workers aware that, although paleontological sensitivity is low, fossils might still be encountered. The Qualified Paleontologist shall oversee this training as well as remain on call in the event fossils are found. | |
| | | GEO-5 | Unknown Sensitivity. Projects involving ground disturbance in previously undisturbed areas mapped as having "unknown" paleontological sensitivity shall retain a Qualified Paleontologist to conduct a field survey of the project | |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | | Level of Significance After Mitigation |
|---|---|---|---|---|
| | | | area to determine the sensitivity of the geologic units, after which the relevant mitigation measures (GEO-1 through GEO-4) shall be applied. | |
| | | GEO-6 | All Projects. In the event of any fossil discovery, regardless of depth or geologic formation, construction work shall halt within a 50-foot radius of the find until its significance can be determined by a Qualified Paleontologist. Significant fossils shall be recovered, prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility in accordance with the standards of the Society of Vertebrate Paleontology (2010). The most likely repository is the Natural History Museum of Los Angeles County (NHMLA). The repository shall be identified, and a curatorial arrangement shall be signed, prior to collection of the fossils. | |
| 5.8 GREENHOUSE GAS EMISSIONS | | | | |
| Impact 5.8-1: Implementation of the proposed General Plan Update would result in a decrease in GHG emissions in horizon year 2040 from existing baseline and is projected to meet the GHG reduction target established under SB 32, but may not meet the long-term GHG reduction goal under Executive Order S-03-05. | Significant | GHG-1 | The City of Corona shall update the Climate Action Plan (CAP) every five years to ensure the City is monitoring the plan's progress toward achieving the City's GHG reduction target and to require amendment if the plan is not achieving specified level. The update shall consider a trajectory consistent with the greenhouse gas (GHG) emissions reduction goal established under Executive Order S-03-05 for year 2050 and the latest applicable statewide legislative GHG emission reduction that may be in effect at the time of the CAP update (e.g., Senate Bill 32 for year 2030). The CAP update shall include the following:<br>• GHG inventories of existing and forecast year GHG levels<br>• Tools and strategies for reducing GHG emissions to ensure a trajectory with the long-term GHG reduction goal of Executive Order S-03-05<br>• Plan implementation guidance that includes, at minimum, the following components consistent with the proposed CAP:<br>▪ Administration and Staffing<br>▪ Finance and Budgeting<br>▪ Timelines for Measure Implementation | Significant and Unavoidable |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | ▪ Community Outreach and Education<br>▪ Monitoring, Reporting, and Adaptive Management Tracking Tools | |
| Impact 5.8-2: The proposed project would not conflict with the plans adopted for the purpose of reducing GHG emissions | Less Than Significant | No mitigation is required. | Less Than Significant |
| 5.9 HAZARDS AND HAZARDOUS MATERIALS | | | |
| Impact 5.9.1: Project construction and operations would involve the transport, use, and/or disposal of hazardous materials. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.9-2: The project site is on a list of hazardous materials sites. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.9-3: Implementation of the proposed project would not result in safety hazards or excessive noise for people residing or working in the airport influence area of the Corona Municipal Airport. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.9-4: Project development would not affect the implementation of an emergency responder or evacuation plan. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.9-5: Portions of the City and SOI are in Very High Fire Hazard Severity Zones (VHFSZs) designated by CAL FIRE and could expose structures and residences to fire danger. | Less Than Significant | No mitigation is required. | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| 5.10 HYDROLOGY AND WATER QUALITY | | | |
| Impact 5.10-1: Development pursuant to the General Plan would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.10-2: Buildout of the General Plan would generate a substantial increase in water demand but would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.10-3: Development pursuant to the General Plan would increase the amount of impervious surfaces and therefore could alter drainage patterns, but would not increase the potential for erosion and siltation on or offsite or create runoff water that would exceed the capacity of storm drain systems or provide substantial additional sources of polluted runoff. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.10-4: Portions of the General Plan area proposed for development are located within flood zones or dam inundation areas but the proposed project would not impede or redirect flood flows. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.10-5: The proposed project would not result in flood hazards associated with flood zones, tsunami, or seiche zones, or due to dam inundation | Less Than Significant | No mitigation is required. | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| **Impact 5.10-6:** Buildout of the General Plan would not obstruct or conflict with the implementation of a water quality control plan or sustainable groundwater management plan. | Less Than Significant | No mitigation is required. | Less Than Significant |
| 5.11 LAND USE AND PLANNING | | | |
| **Impact 5.11-1:** Project implementation would not divide an established community. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.11-2: Implementation of the proposed General Plan Update could conflict with the Corona Municipal Airport ALCUP. | Significant | No feasible mitigation measures were identified. | Significant and Unavoidable |
| 5.12 MINERAL RESOURCES | | | |
| **Impact 5.12-1:** Project implementation would not result in the loss of availability of a known mineral resource. | Significant | MIN-1 Prior to project approval for proposed development of properties classified as either regionally significant construction aggregate MRZ-2 or industrial minerals MRZ-2a, a mineral resource evaluation shall be conducted to determine the significance and economic viability of mining the resource. If development of a property would preclude future extraction of a significant mineral resource, in accordance with CEQA, the City shall make the appropriate findings and adopt a Statement of Overriding Considerations prior to permitting development of the property.<br>MIN-2 Prior to approval of any project on lands classified as either regionally significant construction aggregate MRZ-2 or industrial mineral MRZ-2a, a report shall be prepared that analyzes the project's value in relation to the mineral values found onsite. The analysis shall consider the importance of construction aggregate mineral resource onsite to the market region as a whole, and not just the importance of the resources found within the City and SOI. The report shall be submitted to the City, such that the City has adequate information to develop a statement of reasons for permitting the proposed land use to the California Department of Conservation, State Mining and Geology Board, for subsequent review, in accordance with SMARA, Article 2, Section 2762 and 2763 for areas designated of regional significance. | Significant and Unavoidable |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|---|
| 5.13 NOISE | | | | |
| Impact 5.13-1: Construction activities associated with buildout of the proposed project would result in a temporary increase in noise levels at sensitive receptors. | Significant | N-1 | Construction contractors shall implement the following measures for construction activities conducted in the City. Construction plans submitted to the City shall identify these measures on demolition, grading, and construction plans submitted to the City: The City Corona Public Works 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.<br>• During the active construction period, equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.<br>• Impact tools (e.g., jack hammers and hoe rams) shall be hydraulic- or electric-powered wherever feasible. 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.<br>• Stationary equipment such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses.<br>• Stockpiling shall be located as far as feasible from nearby noise-sensitive receptors.<br>• Construction traffic shall be limited—to the extent feasible—to approved haul routes established by the City.<br>• 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 contact information 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, they shall investigate, take appropriate corrective action, and report the action to the City.<br>• 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 | Significant and Unavoidable |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes.<br>• 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 be responsible for adjusting alarms based on the background noise level, or to utilize human spotters when feasible and in compliance with all safety requirements and laws.<br>• When construction noise is predicted to exceed established noise standards and when the anticipated construction duration is two years or more, contractors shall erect temporary noise barriers, where feasible. | |
| Impact 5.13-2: Buildout of the proposed project would not cause a substantial increase in traffic noise levels. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.13-3: Construction activities associated with buildout of the proposed project may expose sensitive uses to strong levels of groundborne vibration. | Significant | N-2 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 in/sec 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), or the City threshold of 0.05 in/sec RMS (94 VdB). If vibration levels would exceed this threshold, alternative uses such static rollers and drilling piles as opposed to pile driving shall be used. | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
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| Impact 5.13-4: The proximity of the project area to an airport or airstrip would not result in exposure of future residents and/or workers to new airport-related noise. | Less Than Significant | No mitigation is required. | Less Than Significant |
| 5.14 POPULATION AND HOUSING | | | |
| Impact 5.14-1: The proposed project would directly result in population growth in the City of Corona and its SOI. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.14-2: Project implementation would not result in displacing people and/or housing. | Less Than Significant | No mitigation is required. | Less Than Significant |
| 5.15 PUBLIC SERVICES | | | |
| *FIRE PROTECTION AND EMERGENCY SERVICES* | | | |
| Impact 5.15-1: The proposed project would introduce new structures, residents, and workers into the Corona Fire Department, Riverside County, and CAL FIRE service boundaries, thereby increasing the requirement for fire protection facilities and personnel. | Less Than Significant | No mitigation is required. | Less Than Significant |
| *POLICE PROTECTION* | | | |
| Impact 5.15-2: The proposed project would introduce new structures, residents, and workers into the Corona Police Department's service boundaries, thereby increasing the requirement for police protection facilities and personnel. | Less Than Significant | No mitigation is required. | Less Than Significant |
| *SCHOOL SERVICES* | | | |
| Impact 5.15-3: The proposed project would generate up to 7,579 additional students who would impact the school enrollment capacities | Less Than Significant | No mitigation is required. | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
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| of the Corona-Norco Unified School District and the Alvord Unified School District. | | | |
| *LIBRARY SERVICES* | | | |
| Impact 5.15-4: The proposed project would allow for up to 39,298 residents in the General Plan Update area, increasing the service needs for the Corona Public Library, Home Gardens Branch Library, and El Cerrito Branch Library. | Less Than Significant | No mitigation is required. | Less Than Significant |
| 5.16 RECREATION | | | |
| Impact 5.16-1: The proposed project would generate additional residents that would increase the use of existing park and recreational facilities. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.16-2: Implementation of the proposed General Plan Update would not result in environmental impacts associated with new and/or expanded recreational facilities. | Less Than Significant | No mitigation is required. | Less Than Significant |
| 5.17 TRANSPORTATION/TRAFFIC | | | |
| Impact 5.17-1: The Corona General Plan is consistent with adopted programs, plans, ordinances, and policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities in the City. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.17-2: Project-related trip generation in combination with existing and proposed cumulative development would result in designated road and/or highways exceeding the Congestion Management Agency service standards. | Significant | No feasible mitigation measures were identified. | Significant and Unavoidable |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | | Level of Significance After Mitigation |
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| Impact 5.17-3: Project-related trip generation in combination with existing and proposed cumulative development would exceed the City's VMT threshold and would be inconsistent with CEQA Guidelines § 15064.3, subdivision (b). | Significant | T-1 | The City shall consider the following implementation programs to reduce citywide VMT:<br><br>VMT exchange program. VMT generators can select from a pre-approved list of mitigation projects that may be located within the same jurisdiction or possibly from a larger area. The intent is to match the project's needed VMT reduction with a specific mitigation project of matching size and to provide evidence that the VMT reduction will reasonably occur.<br><br>VMT Mitigation Bank. A mitigation bank is intended to serve as an entity or organization that pools fees from development projects across multiple jurisdictions to spend on larger scale mitigation projects. This concept differs from the more conventional impact fee program approach described above in that the fees are directed to a few larger projects that have the potential for a more significant reduction in VMT and the program is regional in nature. | Significant and Unavoidable |
| Impact 5.17-4: Circulation improvements associated with future development that would be accommodated by the General Plan Update would be designed to adequately address potentially hazardous conditions (sharp curves, etc.), potential conflicting uses, and emergency access. | Less Than Significant | No mitigation is required. | | Less Than Significant |
| 5.18 TRIBAL CULTURAL RESOURCES | | | | |
| Impact 5.18-1: The project could impact tribal cultural resources within the project area. | Significant | TCR-1 | Tribal Cultural Resources Monitoring. The project archaeologist, in consultation with interested tribes, the developer and the City of Corona, shall develop an Archaeological Monitoring Plan (AMP) to address the details, timing and responsibility of archaeological and cultural activities that will occur on the project site. Details in the AMP shall include:<br><br>1. Project-related ground disturbance (including, but not limited to, brush clearing, grading, trenching, etc.) and development scheduling; | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | 2. The development of a rotating or simultaneous schedule in coordination with the developer and the project archeologist for designated Native American Tribal Monitors from the consulting tribes during grading, excavation and ground disturbing activities on the site: including the scheduling, safety requirements, duties, scope of work, and Native American Tribal Monitors' authority to stop and redirect grading activities in coordination with all project archaeologists (if the tribes cannot come to an agreement on the rotating or simultaneous schedule of tribal monitoring, the Native American Heritage Commission shall designate the schedule for the onsite Native American Tribal Monitor for the proposed project);<br><br>3. The protocols and stipulations that the developer, City, Tribes and project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.<br><br>At least 30-days prior to application for a grading permit and before any brush clearance, grading, excavation and/or ground disturbing activities on the site take place, the future developer shall retain a tribal cultural monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources.<br><br>Pursuant to the AMP, a tribal monitor from the consulting tribe (e.g., Pechanga Band of Luiseño Indians, Soboba Band of Luiseño Indians, and Gabrieleño Band of Mission Indians – Kizh Nation) shall be present during the initial grading activities. If tribal resources are found during grubbing activities, the tribal monitoring shall be present during site grading activities.<br><br>TCR-2 Treatment and Disposition of Cultural Resources. In the event that Native American cultural resources are inadvertently discovered during the course of any ground disturbing activities, including but not limited to brush clearance, grading, trenching, etc. grading for the proposed project, the following procedures will be carried out for treatment and disposition of the discoveries: | |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | 1. Temporary Curation and Storage: During the course of construction, all discovered resources shall be temporarily curated in a secure location onsite or at the offices of the project archaeologist. The removal of any artifacts from the project site will need to be thoroughly inventoried with tribal monitor oversite of the process; and<br><br>2. Treatment and Final Disposition: The landowner(s) shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources. The applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Corona with evidence of same:<br><br>a. Accommodate the process for onsite reburial of the discovered items with the consulting Native American tribes or bands. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing, basic analysis, and other analyses as recommended by the project archaeologist and approved by consulting tribes and basic recordation have been completed; all documentation should be at a level of standard professional practice to allow the writing of a report of professional quality;<br><br>b. A curation agreement with an appropriate qualified repository within San Bernardino County that meets federal standards per 36 CFR Part 79 and therefore would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Bernardino County, to be accompanied by payment of the fees necessary for permanent curation;<br><br>c. For purposes of conflict resolution, if more than one Native American tribe or band is involved with the project and cannot come to an agreement as to the disposition of cultural materials, | |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | they shall be curated at the San Bernardino County Museum by default;<br><br>d. At the completion of grading, excavation and ground disturbing activities on the site, a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the project archaeologist and Native Tribal Monitors within 60 days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. All reports produced will be submitted to the City, County Museum, and consulting tribes.<br><br>TCR-3 During construction activities, the project applicant shall allow additional archaeological monitors of Native American tribes to access the project site on a volunteer basis to monitor grading and excavation activities. | |
| 5.19 UTILITIES AND SERVICE SYSTEMS | | | |
| *WASTEWATER (SEWER)* | | | |
| Impact 5.19-1: Project-generated wastewater would be adequately treated by the wastewater service providers for the project. | Less Than Significant | No mitigation is required. | Less Than Significant |
| *WATER* | | | |
| Impact 5.19-2: Water supply and delivery systems are adequate to meet project requirements. | Less Than Significant | No mitigation is required. | Less Than Significant |

Table ES-3 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

| Environmental Impact | Level of Significance Before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| *STORM DRAINS* | | | |
| Impact 5.19-3: Existing and/or proposed storm drainage systems are adequate to serve the drainage requirements of the proposed project | Less Than Significant | No mitigation is required. | Less Than Significant |
| *SOLIDWASTE* | | | |
| Impact 5.19-4: Existing and/or proposed facilities would be able to accommodate project-generated solid waste and comply with related solid waste regulations. | Less Than Significant | No mitigation is required. | Less Than Significant |
| 5.20 WILDFIRE | | | |
| Impact 5.20-1: Buildout of the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.20-2: The proposed project would not exacerbate wildfire risks due to slope, prevailing winds, and other factors, thereby exposing project occupants to elevated particulate concentrations from a wildfire. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.20-3: The proposed project would require the installation and maintenance of associated infrastructure in areas that are undeveloped or vacant which could exacerbate fire risk or may result in temporary or ongoing impacts to the environment. | Less Than Significant | No mitigation is required. | Less Than Significant |
| Impact 5.20-4: The proposed project would not 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. | Less Than Significant | No mitigation is required. | Less Than Significant |

# 1. Executive Summary

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# 2. Introduction

## 2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act (CEQA) requires that all state and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. This draft environmental impact report (DEIR) has been prepared to satisfy CEQA and the CEQA Guidelines. The environmental impact report (EIR) is the public document designed to provide decision makers and the public with an analysis of the environmental effects of the proposed project, to indicate possible ways to reduce or avoid environmental damage and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present, and reasonably foreseeable future projects.

The lead agency means "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment" (Guidelines § 21067). The City of Corona has the principal responsibility for approval of the Corona General Plan Interim Technical Update project. For this reason, the City of Corona is the CEQA lead agency for this project.

The intent of the DEIR is to provide sufficient information on the potential environmental impacts of the proposed Corona General Plan Technical Update to allow the City of Corona to make an informed decision regarding approval of the project. Specific discretionary actions to be reviewed by the City are described in Section 3.4, *Intended Uses of the EIR*.

This DEIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code, §§ 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (CEQA Guidelines), as amended (California Code of Regulations, §§ 15000 et seq.)

The overall purpose of this DEIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the environmental effects of the development and operation of the proposed General Plan Update project. This DEIR addresses effects that may be significant and adverse; evaluates alternatives to the project; and identifies mitigation measures to reduce or avoid adverse effects.

## 2.2 NOTICE OF PREPARATION

The City of Corona has determined that an EIR would be required for this project and issued a Notice of Preparation (NOP) on August 14, 2018 (see Appendix A). Comments received during the initial study's public review period, from August 14 to September 14, 2018, are in Appendix B.

The NOP process is used to help determine the scope of the environmental issues to be addressed in the DEIR. Seven agencies/interested parties responded to the NOP. This DEIR has taken those responses into consideration. Table 2-1, *NOP Comment Summary*, summarizes the issues identified by the commenting agencies, along with a reference to the section(s) of this DEIR where the issues are addressed.

Table 2-1 NOP Comment Summary

| Commenting Agency/Person | Date | Comment Topic | Comment Summary | Issue Addressed In: |
|---|---|---|---|---|
| Riverside County Airport Land Use Commission (ALUC) | 8/21/18 | Airport Land Use Compatibility | ▪ Requests review of the General Plan by the ALUC to review consistency with the Corona Municipal Airport's Airport Land Use Compatibility Plan (ALUCP). | ▪ 5.9, Hazards and Hazardous Materials<br>▪ 5.11, Land Use and Planning<br>▪ 5.13, Noise |
| South Coast Air Quality Management District (SCAQMD) | 8/21/18 | Air Quality and Greenhouse Gas (GHG) Emissions | ▪ Request that the air quality and GHG emissions impact analysis utilize the SCAQMD's CEQA Air Quality Handbook, including thresholds of significance.<br>▪ Requests that the General Plan consider SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans.<br>▪ Requests that the General Plan consider goals and policies to reduce health risk to sensitive receptors proximate to SR-91 and other high volume roadways.<br>▪ Requests that the EIR consider mitigation measures identified by SCAQMD and the California Air Pollution Control Officer's Association (CAPCOA) to reduce air quality and GHG impacts.<br>▪ Requests that the EIR consider alternatives that reduce or lessen air quality and GHG impacts.<br>▪ Requests that SCAQMD is identified as a Responsible Agency for actions that require a permit from SCAQMD. | ▪ 5.3, Air Quality<br>▪ 5.8, GHG Emissions |
| Native American Heritage Commission (NAHC) | 8/31/18 | Cultural Resources and Tribal Cultural Resources | ▪ Requests that the EIR evaluate whether there are historic resources that could be impacted by the project.<br>▪ Recommends tribal consultation under Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18) pursuant to NAHC's recommendation for conducting cultural resources assessments. | ▪ 5.5, Cultural Resources<br>▪ 5.18, Tribal Cultural Resources |

Table 2-1 NOP Comment Summary

| Commenting Agency/Person | Date | Comment Topic | Comment Summary | Issue Addressed In: |
|---|---|---|---|---|
| California Native Plant Society (CNPS) – Riverside-San Bernardino Chapter | 9/14/18 | Biological Resources | ▪ Request evaluation of the management of open spaces and conservation of natural resources such as water, soils, plants and animals, viewscapes, air, and energy.<br>▪ Requests and evaluation of the nitrogen deposition on native plant communities.<br>▪ Request that the General Plan consider the influence of land development on ignition probability/wildfire, habitat conservation, and downslope development (erosion/flooding).<br>▪ Requests and evaluation of the beneficial effects (environmental, sociological, water quality, and recreational) of watercourse, conservation lands, and open space.<br>▪ Explanation of how cumulative impacts will be considered.<br>▪ Recommendations on plant and plant community surveys and plant communities names.<br>▪ Address the value of the Bedford Wash as a viable wildlife corridor between Temescal Canyon Wash and the Santa Ana Mountains.<br>▪ Recommends the General Plan and EIR address the need for recreational trails but also requests an analysis of the impact of recreational trails through wildland areas. | ▪ 4.4, Assumptions Regarding Cumulative Impacts<br>▪ 5.3, Air Quality<br>▪ 5.4, Biological Resources<br>▪ 5.8, GHG Emissions<br>▪ 5.8, Hazards and Hazardous Materials<br>▪ 5.10, Hydrology and Water Quality<br>▪ 5.11, Land Use and Planning<br>▪ 5.16, Recreation |
| Southern California Association of Governments (SCAG) | 9/14/18 | Land Use and Planning | ▪ Requests review of the goals and policies of the project with the applicable policies of the Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS). | ▪ 5.11, Land Use and Planning |
| County of Riverside, Transportation and Land Management Agency (TLMA) | 9/17/18 | Transportation | ▪ Request that the update to the City's Circulation Element address inconsistencies between the City and County of Riverside Circulation Elements related to the roadway widths and number of lanes within the City and SOI. | ▪ 5.17, Transportation and Traffic |
| Wes Speake | 8/27/18 and 8/31/18 | Transportation | ▪ Requests clarification that there are no new land uses designations compared to the 2004 General Plan.<br>▪ Requests and evaluation of traffic from the increase in residential and nonresidential traffic.<br>▪ Recommends that the traffic model consider the SR-91 improvements, updates to the regional model, expansion of mining operations, goods movement, and revisions to the City of Eastvale Circulation Element | ▪ 5.17, Transportation and Traffic |

Prior to preparation of the DEIR, the City of Corona hosted a public scoping meeting on August 30, 2018, at the Circle City Center to determine the concerns of responsible and trustee agencies and the community regarding the proposed project. The scoping meeting identified concerns related to traffic (see Section 5.17, *Transportation and Traffic*), recreational access (see Section 5.16, *Recreation*), and aircraft noise (see Section 5.13, *Noise*).

## 2.3 SCOPE OF THIS DEIR

The scope of the DEIR was determined based on the CEQA Guidelines Appendix G CEQA Checklist, comments received in response to the NOP, and comments received at the public scoping meeting conducted by the City. Pursuant to Sections 15126.2 and 15126.4 of the CEQA Guidelines, the DEIR should identify any potentially significant adverse impacts and recommend mitigation that would reduce or eliminate these impacts to levels of less than significant.

This DEIR evaluates potentially significant impacts associated with implementation of the General Plan Update. The information in Chapter 3, *Project Description*, establishes the basis for analyzing future project-related environmental impacts. General Plan Update policies and programs, existing regulations, and mitigation measures have been identified that either reduce or eliminate potentially significant impacts. The focus of the impact analysis is on areas that propose physical changes to the existing environment that may result in environmental impacts (e.g., areas where land use changes are proposed) and on ensuring that development and improvement activities are consistent with the General Plan Update. In addition, the DEIR describes a range of reasonable alternatives to the project that could feasibly attain the basic objectives of the project while substantially avoiding or lessening any of the significant impacts of the proposed project, and evaluates the comparative merits of the alternatives and the proposed project.

### 2.3.1 Impacts Considered Less Than Significant

The EIR identified the following impacts as less than significant or no impact in the DEIR.

- Aesthetics
- Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems
- Wildlife

### 2.3.2 Potentially Significant Adverse Impacts

The City of Corona determined that three environmental factors have potentially significant impacts if the proposed project is implemented.

- Biological Resources
- Geology and Soils
- Tribal Cultural Resources

### 2.3.3 Unavoidable Significant Adverse Impacts

This DEIR identifies eight significant and unavoidable adverse impacts, as defined by CEQA, that would result from implementation of the proposed project. Unavoidable adverse impacts may be considered significant on a project-specific basis, cumulatively significant, and/or potentially significant. The City must prepare a "statement of overriding considerations" before it can approve the project, attesting that the decision-making body has balanced the benefits of the proposed project against its unavoidable significant environmental effects and has determined that the benefits outweigh the adverse effects, and therefore the adverse effects are considered acceptable. The impacts that were found in the DEIR to be significant and unavoidable are:

- Air Quality
- Agriculture and Forestry Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Land Use and Planning
- Mineral Resources
- Noise
- Transportation

## 2.4 INCORPORATION BY REFERENCE

All documents cited or referenced are incorporated into the DEIR in accordance with CEQA Guidelines Sections 15148 and 15150, including but not limited to:

- City of Corona 2004 General Plan Update
- City of Corona Municipal Code

In each instance where a document is incorporated by reference for purposes of this report, the DEIR will briefly summarize the incorporated document or briefly summarize the incorporated data if the document cannot be summarized. In addition, the DEIR will explain the relationship between the incorporated part of the referenced document and the DEIR.

This DEIR also relies on previously adopted regional and statewide plans and programs, agency standards, and background studies in its analyses, such as the South Coast Air Quality Management District's (SCAQMD) air quality management plan. Chapter 13, *Bibliography*, provides a complete list of references utilized in preparing this DEIR. All of the documents that are not published that are incorporated by reference are available for review at:

- City of Corona, Planning Department, Community Development Department, 400 S. Vincentia Avenue, Corona, CA 92882

## 2.5 FINAL EIR CERTIFICATION

This DEIR is being circulated for public review for 45 days. Interested agencies and members of the public are invited to provide written comments on the DEIR to the City address shown on the title page of this document. Upon completion of the 45-day review period, the City of Corona will review all written comments received and prepare written responses for each. A Final EIR (FEIR) will incorporate the received comments, responses to the comments, and any changes to the DEIR that result from comments. The FEIR will be presented to the City of Corona for potential certification as the environmental document for the project. All persons who comment on the DEIR will be notified of the availability of the FEIR and the date of the public hearings before the City.

The DEIR is available to the general public for review at various locations:

- City of Corona, Planning Department, Community Development Department, 400 S. Vincentia Avenue, Corona, CA 92882
- Corona Public Library, 650 South Main Street, Corona, CA, 92882
- Online at: https://www.coronaca.gov/government/departments-divisions/planning-division/general-plan-update

All comments received from agencies and individuals on the DEIR will be accepted during the 45-day public review period. All comments on the DEIR should be sent to:

Joanne Coletta, Community Development Director
City of Corona
400 S. Vicentia Avenue
Corona, CA 92882

Or emailed to Joanne.Coletta@CoronaCA.gov

All public agencies that submit comments during the 45-day public review period on the DEIR will receive written responses to their comments at least 10 days prior to final action on the proposed project. If the City Council decides to certify the FEIR, it will make the necessary findings required by CEQA and the CEQA Guidelines regarding the extent and nature of the impacts presented in the FEIR. The FEIR must be certified by the City prior to making a decision to approve the proposed project. Public input is encouraged at all public hearings and meetings before the Planning Commission and City Council concerning the proposed project.

## 2.6 MITIGATION MONITORING

Public Resources Code, Section 21081.6, requires that agencies adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code 21081 or adopted a Negative

Declaration pursuant to 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration.

The Mitigation Monitoring Program for the Corona General Plan Interim Technical Update will be completed as part of the Final EIR, prior to consideration of the project by the City of Corona City Council.

# 2. Introduction

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# 3. Project Description

## 3.1 PROJECT LOCATION

The City of Corona is located in the northwestern portion of Riverside County, near the convergence of Los Angeles, Orange, and Riverside Counties, 45 miles southeast of the City of Los Angeles, as shown in Figure 3-1, *Regional Map,* and Figure 3-2, *Citywide Aerial*. Corona is located in a valley framed by mountains and the Prado Basin. Original settlements focused development in an area within and adjacent to Grand Boulevard. The City is bordered by the City of Norco to the north, the City of Riverside to the east, and Riverside County to the west and south. The Cleveland National Forest to the south/southwest and the Prado Basin to the northeast border the City; these natural areas are barriers to the future outward growth of Corona.

The City is uniquely defined in Riverside County by its transportation infrastructure. Two major freeways and one railroad transect Corona. The Riverside Freeway (SR-91) runs east-west directly north of the City's center; Interstate 15 (I-15) runs north-south near the eastern edge of the City. These corridors are major transportation routes to the economic center of Orange County from the Inland Empire. In addition, the Burlington Northern Santa Fe (BNSF) railroad transects the center of the community, running parallel to the SR-91. Corona's convenient proximity to both freeways and rail infrastructure contributes to the City's growth and economic strengths; however, freeway traffic volumes are high, causing significant congestion and commuter "cut through" traffic on the city's local street.

Two geographical areas are within the "planning area" covered by the Corona General Plan, the City's corporate limits (City) and its Sphere of Influence (SOI), which are depicted in Figure 3-3, *City of Corona Planning Area*. As defined by the City and the Riverside County Local Agency Formation Commission, the SOI represents the logical service area of the city. Corona includes 39 square miles, plus an additional 32 square miles within its SOI. The SOI includes three geographically distinct areas to the west, east, and south of Corona's incorporated borders:

- The **West Sphere** encompasses the Prado Basin, Coronita, and the Foothill area.
- The **East Sphere** includes the areas of Home Gardens, Eagle Valley East, and El Cerrito.
- Temescal Canyon makes up the **South Sphere**.

The Corona General Plan Update does not propose or anticipate annexation of its sphere of influence at this time. Should annexation of one or more sphere areas be considered at some future point in time, applicable procedures from the Local Agency Formation Commission would apply.

# 3.2 EXISTING LAND USE SUMMARY

The City of Corona encompasses 25,551 acres, and its SOI consists of an additional 16,515 acres, for a total of 42,066 acres across the entire plan area. Table 3-1, *Existing Land Use Summary, City of Corona and Sphere of Influence*, and Figure 3-4, *Existing Land Use*, shows the distribution of existing land uses and the number of housing units, households, population, nonresidential square footage, and jobs in Corona as of January 2018.

Table 3-1 Existing Land Use Summary, City of Corona and Sphere of Influence

| Category | Number of Housing Units | Number of Households[9] | Total Population[9] | Nonresidential Square Feet[13] | Employment (Number of Jobs)[11] |
|---|---|---|---|---|---|
| City of Corona | 48,532 | 46,979 | 165,366 | 52,278,846 | 70,972 |
| Single-Family Residential[1] | 32,943 | 31,889 | 112,249 | — | |
| Multiple-Family Residential[2] | 14,199 | 13,745 | 48,381 | — | |
| Mobile Homes[1] | 1,389 | 1,345 | 4,733 | — | |
| Airport | — | — | — | 385,649 | 50 |
| Commercial[3, 10] | — | — | — | 11,738,816 | 23,479 |
| Office[4] | — | — | — | 2,586,253 | 7,757 |
| Industrial[5, 10] | — | — | — | 32,036,533 | 32,639 |
| Parks, Cultural, Civic, & Education[6] | — | — | — | 5,290,841 | 6,786 |
| All Other[7] | — | — | — | 240,754 | 261 |
| Sphere of Influence (SOI)[12] | 10,896 | 10,351 | 37,264 | 3,436,459 | 4,346 |
| Single-Family Residential[1] | 9,820 | 9,329 | 33,584 | — | — |
| Multiple-Family Residential[2] | 432 | 410 | 1,477 | — | — |
| Mobile Homes[1] | 642 | 610 | 2,196 | — | — |
| Airport | — | — | — | — | — |
| Commercial[3, 10] | — | — | — | 490,531 | 1,172 |
| Office[4] | — | — | — | 1,890 | 31 |
| Industrial[5, 10] | — | — | — | 2,392,643 | 2,562 |
| Parks, Cultural, Civic, & Education[6] | — | — | — | 551,395 | 581 |
| All Other[7] | 2 | 2 | 7 | — | — |
| Total City + SOI | 59,428 | 10,351 | 202,630 | 55,715,305 | 75,318 |

Notes:

1 Single-Family Residential includes: existing single family residential, rural residential, and mobile home, and growth in vacant areas.

2 Multi-Family Residential includes: all existing apartments, stacked flats, and attached residential (duplexes, triplexes, quads, etc.), planned projects, and growth in vacant areas. Housing that had a shared wall was considered multiple-family residential.

3 Commercial includes: need a general definition of types of uses.

4 Office includes: existing office and professional uses

5 Industrial includes: existing light industrial, heavy industrial, general industrial, and mining uses.

6 Parks, Cultural, Civic, & Education include: existing educational, public, civic, and religious facilities, public open spaces, parks, and golf courses.

7 Other includes: existing agricultural uses, natural open space, open space, and private open space (including the El Sobrante Landfill)

8 Assumes occupancy rate of 96.8% for the City (Department of Finance, Report E-5 (DOF) 2018) and 95% for the SOI (Per TCAP Projections).

9 Assumes persons per household rate of 3.52 (DOF 2018) and 3.60 for the SOI (Per TCAP Projections).

10 Mixed Use. Unless a specific plan prescribes the mix of uses, growth in vacant mixed use districts MUD and MU 1 is included under commercial square footage and growth in vacant MU 2 districts is included under industrial square footage.

11 Employment Factors used in estimating jobs (employees/building sf): Commercial (2/1000), Office (3/1000), Industrial (1/1000), Educational Institutions (1/1000), Religious Facilities (1/1000), Public & Recreational Facilities (2/1000). Utility and agriculture jobs were fixed at present levels.

12 All totals within the Unincorporated SOI are based on the 2016 Draft of the Temescal Canyon Area Plan (TCAP).

13 Building square foot estimates in the SOI are consistent with the methodology described in Appendix E-1 of the County of Riverside General Plan.

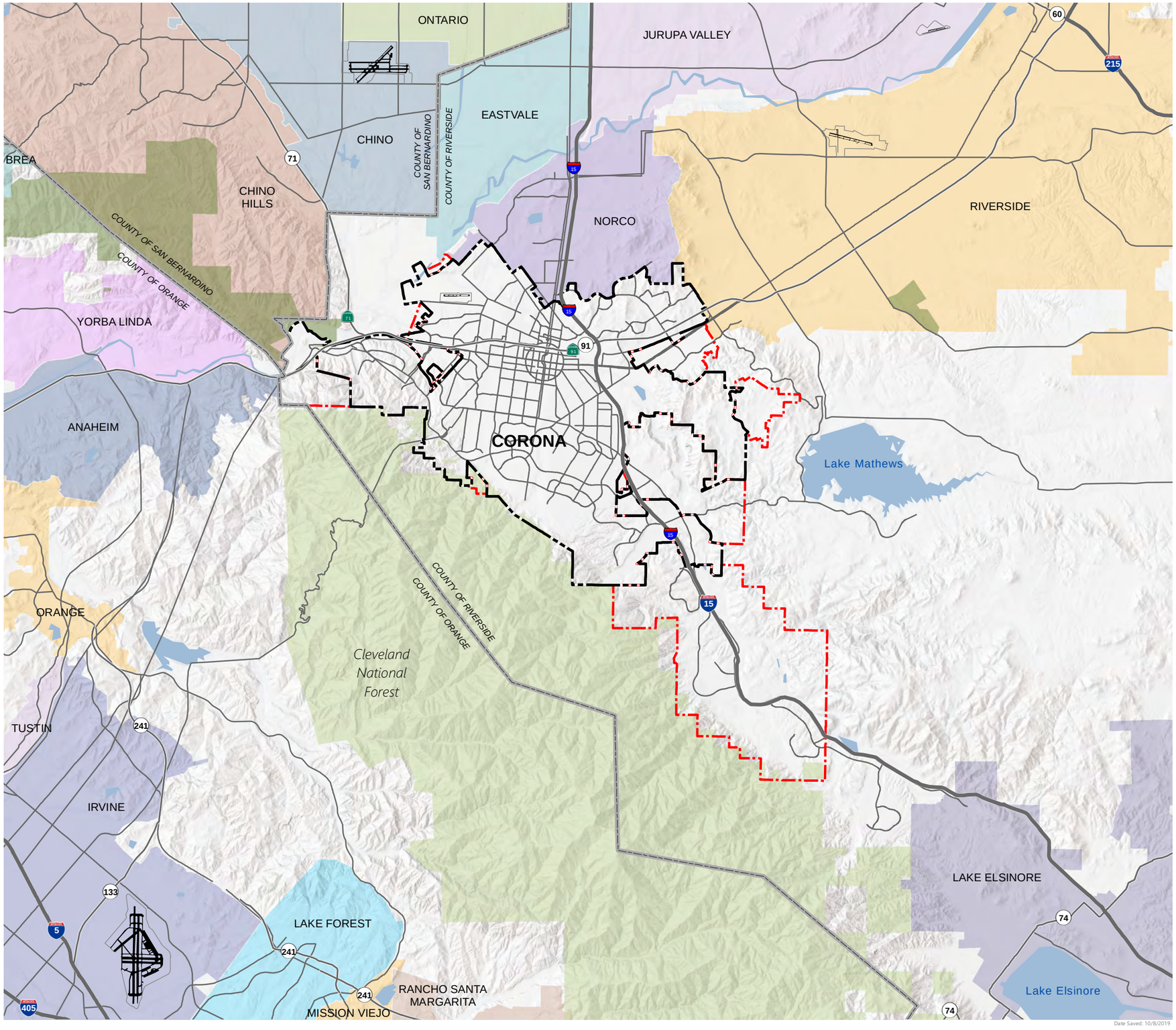


Figure 3-1

# REGIONAL MAP

Legend

- City Boundary
- Sphere of Influence Areas
- National Parks and Forests
- State Parks and Forests

*Source:*
*City of Corona 2017*
*County of Riverside 2017*
*County of Orange 2017*
*County of San Bernardino 2017*
*US Forest Service 2017*

Date Saved: 10/8/2019

CORONA General Plan EIR

Miles
0 0.5 1 1.5 2 2.5 3

PLACEWORKS

# 3. Project Description

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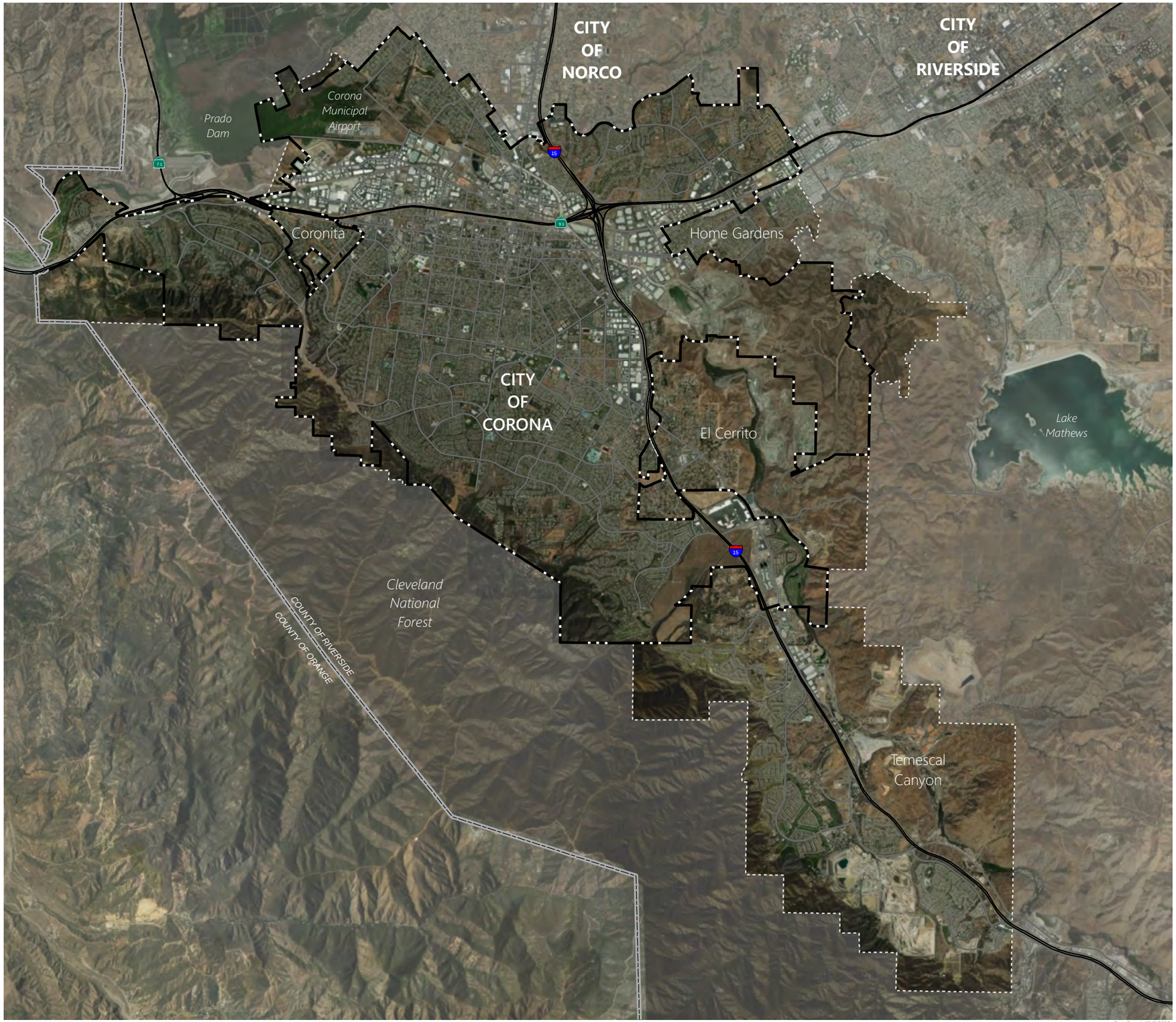


Figure 3-2

# CITYWIDE AERIAL

Legend

- City Boundary
- Sphere of Influence Areas

*Source:*
*City of Corona 2017*

CORONA General Plan EIR

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PLACEWORKS

# 3. Project Description

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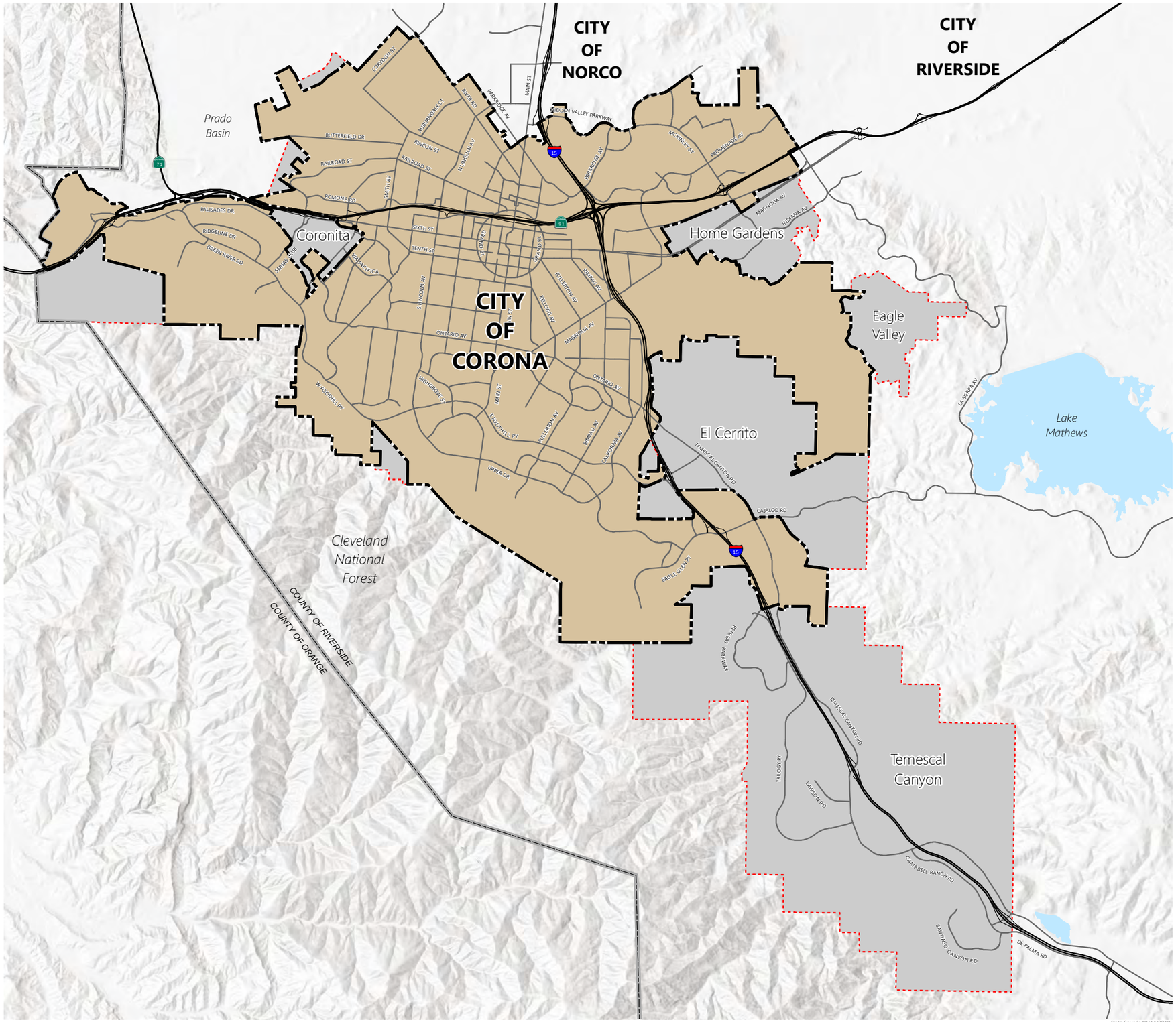


Figure 3-3

# PLANNING AREA

Legend

- City Boundary
- Sphere of Influence Areas

*Source:*
*Corona 2019*
*County of Riverside 2019*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

# 3. Project Description

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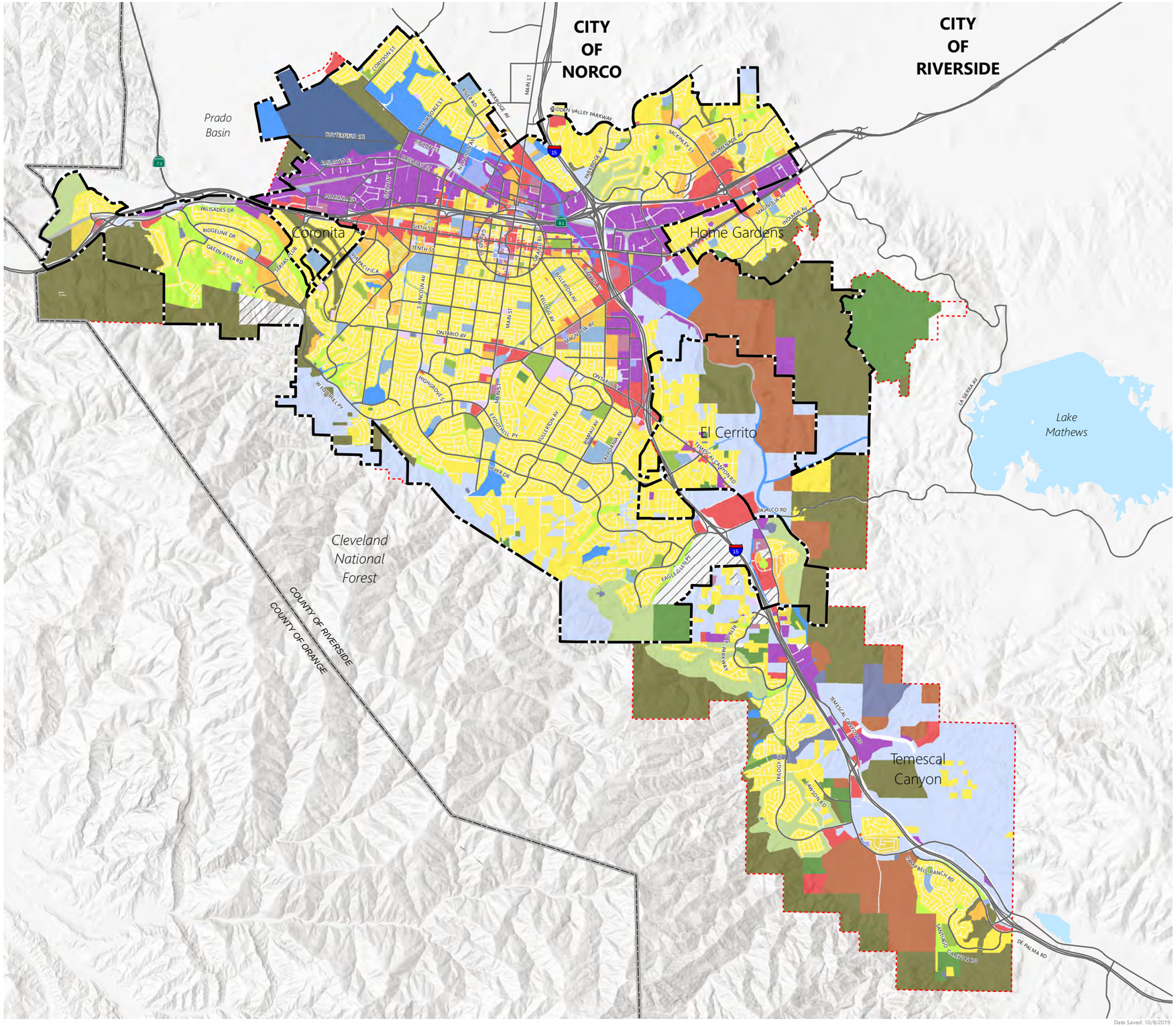
Figure 3-4

# EXISTING LAND USE




## Legend

- City Boundary
- Sphere of Influence Areas
- Single-Family Residential
- Multi-Family Residential
- Mobile Homes
- Airport
- Commercial
- Office
- Industrial
- Mining
- Educational Facilities
- Religious Facilities
- Public Facilities
- Public Open Space/ Parks
- Golf Course
- Agriculture
- Natural Open Space
- Open Space
- Rail Road
- Right-of-Way
- Under Construction
- Utility Facilities
- Vacant
- Water/Flood Control

*Source:*
*Corona 2017*
*County of Riverside 2017*

CORONA General Plan EIR

Miles
0 0.5 1 1.5 2

PLACEWORKS

# 3. Project Description

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## 3.3 STATEMENT OF OBJECTIVES

The technical update of the General Plan is different from the comprehensive update adopted in 2004. The technical update builds on the vision created at the time to address contemporary trends. While this project updates the Land Use Map to include General Plan amendments that have been approved since 2004, no additional changes in land uses, intensity or density, or changes in land use descriptions are being proposed. The technical update accommodates updates to certain goals and policies in the General Plan elements, addresses new state laws and regulations enacted by the state legislature (e.g., healthy communities and environmental justice, climate change and resiliency, wildland fire safety, and complete streets) and updated transportation and traffic modeling based on updates of existing conditions and projected future growth.

Within this context, the City of Corona's guiding principles for the proposed General Plan update, Climate Action Plan, and General Plan EIR are as follows:

1. Provide well-designed and accessible residential neighborhoods and commercial and industrial districts to provide opportunities for people to live, work, and play.

2. Retain and enhance Corona's small-town character and its neighborhoods to provide a diversity of housing, neighborhoods, and amenities.

3. Restore downtown Corona as the symbolic, functional, and historic core of the city.

4. Ensure that people, goods, and services move safely and efficiently through the city and connect to the larger region.

5. Improve employment opportunities for Corona's residents by encouraging existing businesses to invest and expand in Corona; recruit clean, high-technology businesses and research-and-development companies; provide jobs that match the skill of Corona's residents; and support the city's economic base through adequate land and infrastructure.

6. Ensure that Corona is a safe community for residents, business, and visitors.

7. Respect and enhance Corona's environmental resources by creating connections between the built and natural environment to increase awareness of and opportunities for enjoyment by Corona's residents and integrate conservation practices to lessen the burden on the environment.

8. Engage Corona's active citizenry to achieve an efficient and responsive government that works with its citizens and regional agencies to meet collective needs and provide timely and understandable information.

9. Foster a vibrant community that supports healthy lifestyles, historical resources, arts, education, and culture for all residents.

# 3.4 PROJECT CHARACTERISTICS

"Project," as defined by the CEQA Guidelines, means:

> ... the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)…enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code §§ 65100–65700. (14 Cal. Code of Reg. § 15378[a])

## 3.4.1 Description of the Project

The proposed project is a technical update of the City of Corona's adopted General Plan, which includes an update to the City's Climate Action Plan (CAP). The General Plan is a State-required legal document that provides guidance to decision-makers regarding the allocation of resources and determining the future physical form and character of development in the City and its SOI. It is the official statement of the City regarding the extent and types of development needed to achieve the community's physical, economic, social, and environmental goals. Although the General Plan is composed of individual sections, or "elements," that individually address a specific area of concern, the General Plan embodies a comprehensive and integrated planning approach for the jurisdiction. The CAP Update establishes goals and policies that incorporate environmental responsibility into the everyday management of community operations.

## 3.4.2 Proposed General Plan

The updated Corona General Plan addresses the eight mandatory elements required by state law—land use, housing, circulation, conservation and open space (included as environmental resources), noise, safety, and environmental justice—as stand-alone chapters. As allowed by state law, the General Plan also includes elective elements that relate to the physical development of the city. The elective elements—community design, historic resources, parks and recreation, infrastructure/utilities, police and fire, and healthy community—carry the same legal weight as the mandatory elements.

- The **Land Use Element** provides guidance for the type and pattern of development in Corona and its SOI. It defines how lands are to be used, the density and intensity of development, the physical form and character of development, and a strategy for where growth will occur and what lands and uses will be conserved and improved.

- The **Housing Element** focuses on the actions that will be undertaken by the City to provide adequate housing for all income categories of the population and those with special needs. Pursuant to Government Code Section 65588, state law requires the city's local Housing Element to be updated periodically to reflect the community's housing needs. The state mandate for updating the Housing Element is 2021 and will be done separately from the General Plan Technical Update. Therefore, only its goals and policies have been incorporated into the comprehensive general plan.

- The **Community Design Element** provides guidance for the design character of Corona's public streetscapes, entries, and activity nodes. It expands on and complements the project design and development guidelines defined for the city's residential neighborhoods, commercial/office, industrial, and mixed-use districts in the land use element and has supplemental citywide design guidelines.

- The **Historic Resources Element** provides guidelines to preserve resources that represent the history and culture of Corona. Specifically, the element is intended to provide guidance in developing and implementing programs, in concert with community partners, that ensure the identification, designation, and protection of cultural and historical resources for future Corona generations.

- The **Economic Development Element** provides a framework to ensure that the City is able to maintain its strong economic base and take advantage of future economic opportunities.

- The **Parks, Recreation, Cultural Arts, and Education Element** focuses on enhancing Corona's park, recreation, cultural arts, and educational facilities and programs; identifying opportunities in the community; and determining which can be pursued to adapt to changing needs. The inclusion of this element also enables a municipality to mandate a requirement for providing parkland resources as a condition of development approval, as set out in the Quimby Act.

- The **Circulation Element** is the blueprint for moving people, goods, and resources throughout Corona in a manner that supports the land use element. This element embraces opportunities to create a multimodal, safe, and efficient circulation system that will address local traffic congestion, encourage increased transit use, respond to local business needs, and encourage pedestrians and bicyclists to use the network of streets for travel and recreational purposes. The circulation element outlines the long-term plan for roadways, including numbers of lanes, right-of-way, and general operating conditions. It also provides guidance relating to the transit system, goods movement system, and nonmotorized travel, including bicycle and pedestrian travel.

- The **Infrastructure and Utilities Element** provides a framework for making physical improvements to utility and infrastructure facilities that enhance quality of life. The element guides water systems (distribution, treatment, storage, and delivery of potable water to meet local needs); sewer/wastewater systems (collection and treatment of wastewater); storm drainage (infrastructure needed to protect people and property from flooding as well as protect the environment); and energy, solid waste, and telecommunications.

- The **Public Safety Element** sets proactive and coordinated programs to protect against foreseeable natural and human-caused hazards, and includes goals and policies pertaining to emergency preparedness and programming police and fire personnel and facilities within the City of Corona. This element is intended to: 1) recognize the local hazards associated with Corona's environment, 2) identify methods to manage these risks and protect people, property, infrastructure, and structures from harm, 3) evaluate police services (provision of police services provided to the community that are fair, equitable, and community-based to ensure the safety of people, business, and visitors); fire services (reducing fire hazards through regulations, address how the City responds to emergencies, and ensure the safety of

people, business, and visitors), and 4) incorporate emergency preparedness (procedures, methods, and protocols to prepare for emergencies and disasters, respond to them, and recover from them). This element offers goals, policies, and programs that are intended to reduce the risk of geologic, flood, and fire hazards and protect against man-made hazards. Natural hazards include a range of seismic and geologic hazards, flooding hazards, wildland and urban fire hazards, and severe weather, most of which are caused by inclement weather or natural events. Human-caused hazards include air pollution, hazardous materials, and aviation hazards that are caused by human activities.

- The **Noise Element** strives to preserve the quality of life by protecting the community from the obtrusive impacts of noise- and vibration-generating uses such as traffic, construction, airplanes, and industrial uses, as well as other sources within Corona. The intent of the noise element is to establish a pattern of land uses that minimizes the exposure of community residents to excessive noise while at the same time having to embrace transit-oriented development that includes having residents and businesses in proximity to high quality transit, such as rail services provided by Metrolink. This noise element also addresses the issue of vibration and its impact on sensitive land uses

- The **Healthy Community Element** integrates principles of health into the community, such as the natural environment, community design, social environment, and health care access. This element provides goals and policies to (1) reduce the unique or compounded health risks in disadvantaged communities; (2) promote civil engagement in the public decision-making process; and (3) prioritize improvements and programs that address the needs of disadvantaged communities.

- The **Environmental Resources Element** addresses the conservation, development, and use of natural resources, including water, forests, rivers, agriculture, and other resources. It also requires addressing the preservation and conservation of open-space lands, including those for the production of resources, the protection of biotic resources, and recreational purposes, among others. This element addresses the following resources: water resources (including the sustainable management of water basins, the quality of water resources, and areas required for water recharge); biological resources (including open spaces that provide habitat for plant and wildlife species); agricultural and mineral resources; air resources (reducing criteria pollutants, toxic air contaminants and greenhouse gases); and trails resources (including existing and planned cycling, hiking, and multi-use trails through open spaces).

#### 3.4.2.1 LAND USE DESIGNATIONS

### City of Corona

Table 3-2, *Land Use Designations in the City,* and Figure 3-5, *Land Use Plan, City of Corona,* show the land use designations regulating development in the City.

Table 3-2 Land Use Designations in the City

| General Plan Land Use Designations | Implementing Zones | Permitted Uses (General Description) |
|---|---|---|
| City of Corona | | |
| Agriculture | A1, A-14.4; | Agriculture activities, such as citrus crops, housing and ancillary facilities |
| Rural Residential | R-1A; R-1-20 | Large lot single-family homes, light agriculture uses (orchards, berry and bush crops, etc.), accessory buildings |
| Estate Residential | A-14,4; R-1A<br>R-1-20, R-1-12.0 | Single-family homes, light agriculture uses (orchards, berry and bush crops, etc.), accessory buildings |
| Low Density | PCD. R-14.4; R-1-12.0, R-1-9.6; R-1-8.4; R-1-7.2 | Single-family dwellings, duplexes and multiple-family residences, and accessory dwelling units. |
| Low-Medium Density | PCD<br>R-2 | Single- or low-density multiple-family dwellings with either one or more dwellings on the same lot |
| Medium Density | PCD; R-2; R-3; and -R3-C; R-G, and MP | Attached housing such as townhomes and duplexes, as well as detached single-family dwellings |
| High Density | PCD; R-3; MP | Multiple-family dwellings, including apartments, condominiums, and duplexes |
| Urban Density Residential | UDR | Multiple-family units through innovative design within the City's opportunity districts |
| Mixed Use I | Various zones by specific plan | Commercial and residential |
| Downtown Mixed Use | Various zones by specific plan | Exclusively retail commercial or mix of commercial and residential |
| Mixed Use II | Commercial and Industrial zones<br>by specific plan | Exclusively light industrial and commercial |
| General Commercial | C-2<br>C-3 | Supermarkets, department stores, apparel stores, theaters, and nonretail uses such as offices and banks |
| Office Professional | C-P | General business offices, banks, finance, insurance, and real estate offices, medical offices, and professional offices |
| General Industrial | M-2; M-3; M-4 | Manufacturing, construction, wholesale trade, transportation, warehousing, vehicle storage, and related services |
| Light Industrial | M-1<br>M-4 | Low-intensity, nonpolluting manufacturing, research and development, e-commerce, wholesale, and distribution |
| Open Space General | OS Open Space | Permanently protected land for habitat, topography, scenic quality, public safety, or comparable purpose |
| Open Space Recreation | OS Open Space | Lands committed as public or private recreation including a golf course |
| Public and Institutional | QP Institutional Uses | Park, school, civic, fire station, utility, and institutional use |

Source: Corona 2004a

## Sphere of Influence

Table 3-3, *Land Use Designations in the SOI,* and Figure 3-6, *Land Use Plan – Sphere of Influence Areas,* show the land use designations that regulate development in the SOI.

# 3. Project Description

Table 3-3 Land Use Designations in the SOI

| General Plan Land Use Designations | Density and Intensity | Permitted Uses (General Description) |
|---|---|---|
| Agriculture (AG) | 10 ac min | Agricultural land including row crops, groves, nurseries, dairies, poultry farms, processing plants, and other related uses. One single-family residence allowed per 10 acres except as otherwise specified by a policy or an overlay. |
| Rural Residential | 5 ac min | Single-family residences with a minimum lot size of 5 acres.<br>Allows limited animal keeping and agricultural uses, recreational uses, compatible resource development (not including mining) and associated uses and governmental uses. |
| Rural Mountainous (RM) | 10 ac min | Single-family residential uses with a minimum lot size of 10 acres.<br>Areas 10 acres+ where a minimum of 70% of the area has slopes of 25% or greater.<br>Allows limited animal keeping, agriculture, recreational uses, compatible resource development (which may include the commercial extraction of mineral resources with approval of a SMP) and associated uses and governmental uses. |
| Rural Desert (RD) | 10 ac min | Single-family residential uses with a minimum lot size of 10 acres.<br>Allows limited animal keeping, agriculture, recreational, renewable energy uses including solar, geothermal and wind energy uses, as well as associated uses required to develop and operate these renewable energy sources, compatible resource development (which may include the commercial extraction of mineral resources with approval of SMP), and governmental and utility uses. |
| Estate Density Residential (RCEDR) | 2 ac min | Single-family detached residences on large parcels of 2 to 5 acres.<br>Limited agriculture |
| Very Low Density Residential (RC-VLDR) | 1 ac min | Single-family detached residences on large parcels of 1 to 2 acres.<br>Limited agriculture, intensive equestrian and animal keeping uses are expected and encouraged. |
| Low Density Residential (RCLDR) | 0.5 ac min | Single-family detached residences on large parcels of 0.5 to 1 acre.<br>Limited agriculture, intensive equestrian and animal keeping uses are expected and encouraged. |
| Open – Space Conservation (OS-C) | N/A | The protection of open space for natural hazard protection, cultural preservation, and natural and scenic resource preservation. Existing agriculture is permitted. |
| Open Space-Conservation Habitat (OS-CH) | N/A | Applies to public and private lands conserved and managed in accordance with adopted Multi Species Habitat and other Conservation Plans and in accordance with related Riverside County policies. |
| Open Space-Water (OS-W) | N/A | Includes bodies of water and natural or artificial drainage corridors.<br>Extraction of mineral resources subject to SMP may be permissible provided that flooding hazards are addressed and long term habitat and riparian values are maintained. |
| Open Space-Recreation (OS-R) | N/A | Recreational uses including parks, trails, athletic fields, and golf courses.<br>Neighborhood parks are permitted within residential land uses. |
| Open Space-Rural (OS-RUR) | 20 ac min | One single-family residence allowed per 20 acres.<br>Extraction of mineral resources subject to SMP may be permissible provided that scenic resources and views are protected. |
| Open Space-Mineral Resources (OS-MR) | N/A | Mineral extraction and processing facilities.<br>Areas held in reserve for future mineral extraction and processing. |
| Estate Density Residential (EDR) | 2 ac min | Single-family detached residences on large parcels of 2 to 5 acres.<br>Limited agriculture and animal keeping is permitted, however, intensive animal keeping is discouraged. |
| Very Low Density Residential (VLDR) | 1 ac min | Single-family detached residences on large parcels of 1 to 2 acres.<br>Limited agriculture and animal keeping is permitted, however, intensive animal keeping is discouraged. |

Table 3-3 Land Use Designations in the SOI

| General Plan Land Use Designations | Density and Intensity | Permitted Uses (General Description) |
|---|---|---|
| Low Density Residential (LDR) | 0.5 ac min | Single-family detached residences on large parcels of 0.5 to 1 acre. Limited agriculture and animal keeping is permitted, however, intensive animal keeping is discouraged. |
| Medium Density Residential (MDR) | 2–5 du/ac | Single-family detached and attached residences with a density range of 2 to 5 units/acre. Limited agriculture and animal keeping is permitted, intensive animal keeping is discouraged. Lot sizes range from 5,500 to 20,000 sq. ft., typical 7,200 sq. ft. lots allowed. |
| Medium High Density Residential (MHDR) | 5–8 du/ac | Single-family attached and detached residences with a density range of 5 to 8 units/acre. Lot sizes range from 4,000 to 6,500 sq. ft. |
| High Density Residential (HDR) | 8–14 du/ac | Single-family attached and detached residences, including townhouses, stacked flats, courtyard homes, patio homes, townhouses, and zero lot line homes. |
| Very High Density Residential (VHDR) | 14–20 du/ac | Single-family attached residences and multi-family dwellings. |
| Highest Density Residential (HHDR) | 20+ du/ac | Multi-family dwellings, includes apartments and condominium. Multi-storied (3+) structures are allowed. |
| Commercial Retail (CR) | 0.20–0.35 FAR | Local and regional serving retail and service uses. The amount of land designated for CR exceeds that amount anticipated to be necessary to serve Riverside County's population at buildout. Once buildout of CR land reaches the 40% level within any Area Plan, additional studies will be required before CR development beyond the 40% will be permitted. |
| Commercial Tourist (CT) | 0.20–0.35 FAR | Tourist related commercial including hotels, golf courses, and recreation/amusement activities. |
| Commercial Office (CO) | 0.35–1.0 FAR | Variety of office related uses including financial, legal, insurance and other office services. |
| Light Industrial (LI) | 0.25–0.60 FAR | Industrial and related uses including warehousing/distribution, assembly and light manufacturing, repair facilities, and supporting retail uses. |
| Heavy Industrial (HI) | 0.15–0.50 FAR | More intense industrial activities that generate greater effects such as excessive noise, dust, and other nuisances. |
| Business Park (BP) | 0.25–0.60 FAR | Employee intensive uses, including research and development, technology centers, corporate offices, clean industry and supporting retail uses. |
| Public Facilities (PF) | < 0.60 FAR | Civic uses such as County of Riverside administrative buildings and schools. |
| Community Center (CC) | 5–40 du/ac 0.10–0.3 FAR | Includes combination of small-lot single family residences, multi-family residences, commercial retail, office, business park uses, civic uses, transit facilities, and recreational open space within a unified planned development area. This also includes Community Centers in adopted specific plans. |
| Mixed-Use Planning Area | variable | This designation is applied to areas outside of Community Centers. The intent is not to identify a particular mixture or intensity of land uses, but to designate areas where a mixture of residential, commercial, office, entertainment, educational, and/or recreational uses, or other uses is planned. |

Source: Riverside County 2015.

Note: The Temescal Canyon Area Plan contains additional policy focus areas that are overlaid onto area plan land use designations. These overlays provide a additional regulatory guidance for different areas of Temescal Canyon. Specifically, a Mixed Use Town Center Overlay covers part of the Home Gardens SOI area. Additional overlays can be found in the Temescal Canyon Area Plan.

### 3.4.2.2 LAND USE SUMMARY

The land use designations for the Corona General Plan Technical Update are the same as those described in the Current Land Use Plan of the General Plan. Table 3-4, *Proposed Land Use Summary*, details the projected

population, employment, dwelling units, and nonresidential square footage of development in the City and SOI planned for under the General Plan Technical Update, and compares these buildout projects to Year 2040 to existing conditions.

Table 3-4 Proposed Land Use Summary

| Category | Number of Housing Units | Number of Households[9] | Total Population[8] | Nonresidential Square Feet[13] | Employment (Number of Jobs)[11] |
|---|---|---|---|---|---|
| City of Corona | | | | | |
| Single-Family Residential[1] | 36,239 | 35,079 | 123,479 | — | |
| Multiple-Family Residential[2] | 16,389 | 15,865 | 55,843 | — | |
| Mobile Homes[1] | 1,389 | 1,345 | 4,733 | — | |
| Airport | — | — | — | 385,649 | 50 |
| Commercial[3, 10] | — | — | — | 13,655,273 | 27,307 |
| Office[4] | — | — | — | 3,107,289 | 9,318 |
| Industrial[5, 10] | — | — | — | 38,966,469 | 39,929 |
| Parks, Cultural, Civic, & Education[6] | — | — | — | 5,439,216 | 7,530 |
| All Other[7] | — | — | — | 240,754 | 261 |
| City of Corona | 54,026 | 52,297 | 184,086 | 61,794,650 | 84,395 |
| Sphere of Influence[12] | | | | | |
| Single-Family Residential[1] | 14,916 | 14,170 | 51,013 | — | — |
| Multiple-Family Residential[2] | 1,278 | 1,214 | 4,371 | — | — |
| Mobile Homes[1] | 642 | 610 | 2,196 | — | — |
| Airport | — | — | — | — | — |
| Commercial[3, 10] | — | — | — | 1,107,840 | 3,152 |
| Office[4] | — | — | — | 1,096,079 | 1,924 |
| Industrial[5, 10] | — | — | — | 17,362,493 | 15,696 |
| Parks, Cultural, Civic, & Education[6] | — | — | — | 830,595 | 1,210 |
| All Other[7] | 77 | 73 | 263 | — | 97 |
| City of Corona SOI | 16,913 | 16,067 | 57,842 | 20,397,007 | 22,079 |
| Grand Total | | | | | |
| City of Corona + SOI | 70,939 | 68,364 | 241,928 | 82,191,657 | 106,474 |

1 Single-Family Residential includes: existing single family residential, rural residential, and mobile home, and growth in vacant areas.
2 Multi-family Residential includes: all existing apartments, stacked flats, and attached residential (duplexes, triplexes, quads, etc.), planned projects, and growth in vacant areas. Housing that had a shared wall was considered multiple-family residential.
3 Commercial includes: need a general definition of types of uses.
4 Office includes: existing office and professional uses.
5 Industrial includes: existing light industrial, heavy industrial, general industrial, and mining uses.
6 Parks, Cultural, Civic, & Education include: existing educational, public, civic, and religious facilities, public open spaces, parks, and golf courses.
7 Other includes: existing agricultural uses, natural open space, open space, and private open space (including the El Sobrante Landfill).
8 Assumes occupancy rate of 96.8% for the City (DOF 2018) and 95% for the SOI (TCAP Projections).
9 Assumes persons per household rate of 3.52 (DOF 2018) and 3.60 for the SOI (TCAP Projections).
10 Mixed Use. Unless a specific plan prescribes the mix of uses, growth in vacant mixed use districts MUD and MU 1 is included under commercial square footage and growth in vacant MU 2 districts is included under industrial square footage
11 Employment Factors used in estimating jobs (employees/building sf): Commercial (2/1000), Office (3/1000), Industrial (1/1000), Educational Institutions (1/1000), Religious Facilities (1/1000), Public & Recreational Facilities (2/1000). Utility and agriculture jobs were fixed at present levels.
12 All totals within the Unincorporated SOI are based on the 2016 Draft of the Temescal Canyon Area Plan (TCAP).
13 Building square foot estimates in the SOI are consistent with the methodology described in Appendix E-1 of the County of Riverside General Plan.

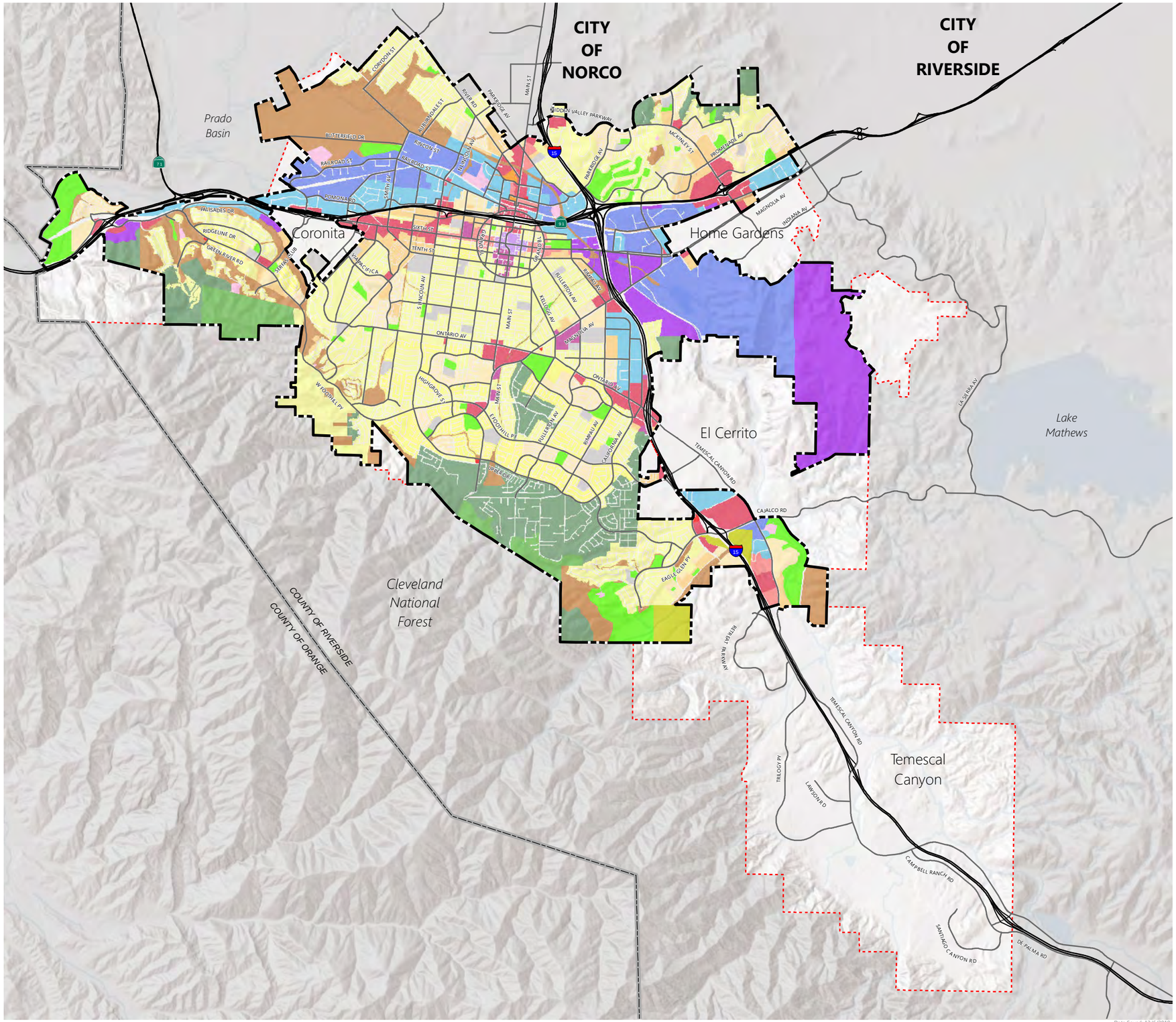


Figure 3-5

# LAND USE PLAN

CITY OF CORONA

## Legend

- City Boundary
- Sphere of Influence Areas
- Agriculture (AG)
- Estate Residential (ER)
- Rural Residential (RR 2)
- Low Density Residential (LDR)
- Low Medium Density Residential (LMDR)
- Medium Density Residential (MDR)
- High Density Residential (HDR)
- Urban Density Residential (UDR)
- General Commercial (GC)
- Office Professional (OP)
- Mixed Use Downtown (MUD)
- Mixed Use: Commercial/Residential (MU 1)
- Mixed Use: Industrial/Commercial (MU 2)
- Light Industrial (LI)
- General Industrial (GI)
- Parks, Open Space Recreational (P, OS/R)
- Open Space General (OS, OS/G)
- School (S)
- Fire Station (FS)
- Utility (U)

*Source:*
*City of Corona 2017*

Date Saved: 12/6/2019

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

# 3. Project Description

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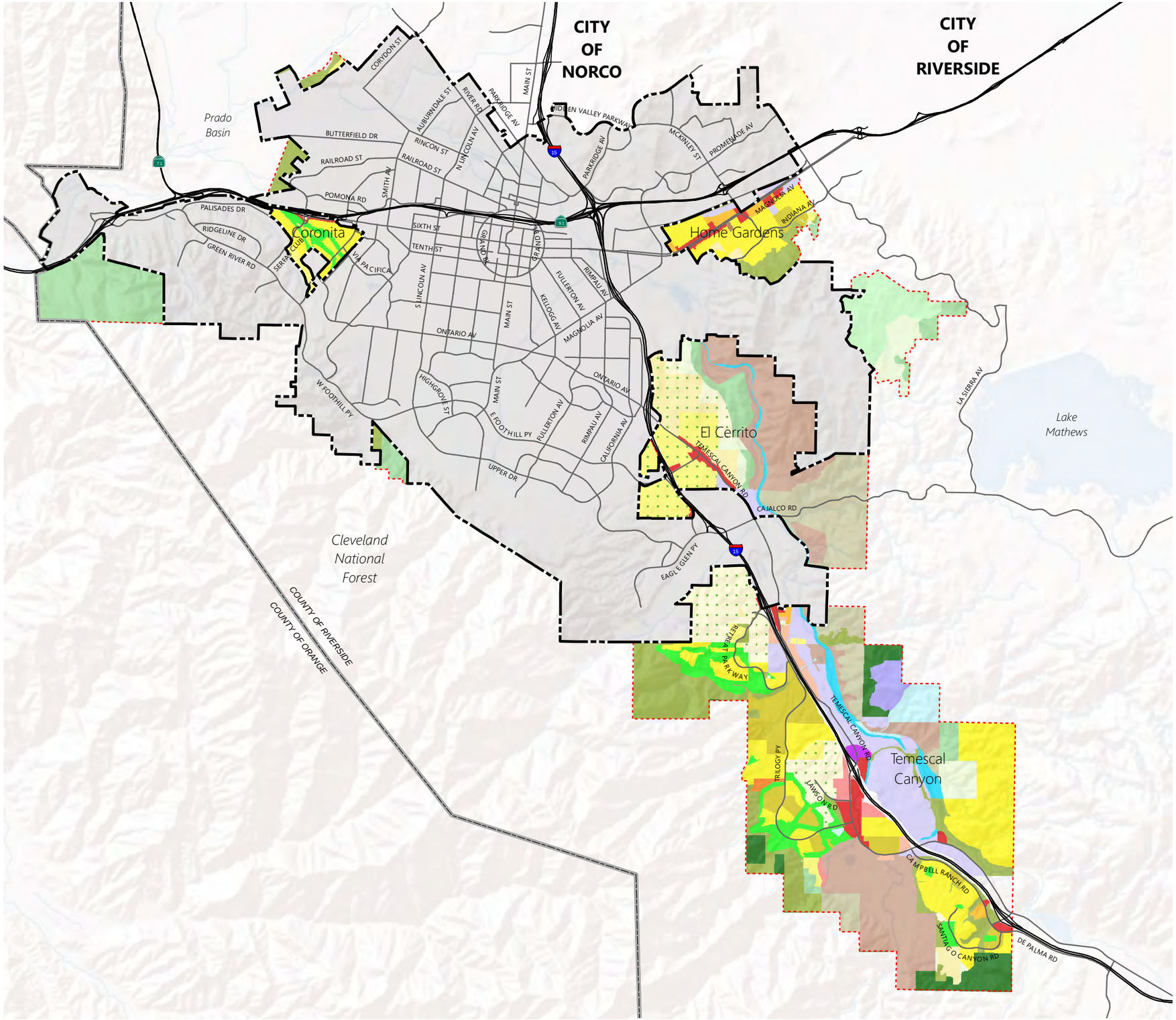


Figure 3-6

# LAND USE PLAN

## SPHERE OF INFLUENCE AREAS

### Legend

- City Boundary
- Sphere of Influence Areas
- Rural Community - Estate Density Residential
- Rural Community - Very Low Density Residential
- Rural Community - Low Density Residential
- Estate Density Residential
- Very Low Density Residential
- Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Very High Density Residential
- Highest Density Residential
- Commercial Retail
- Commercial Tourist
- Commercial Office
- Community Center
- Light Industrial
- Heavy Industrial
- Business Park
- Public Facilities
- Rural Residential
- Rural Mountainous
- Agriculture
- Conservation
- Conservation Habitat
- Open Space Recreation
- Open Space Rural
- Water
- Mineral Resources
- City

*Source:*
*Riverside County 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

# 3. Project Description

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#### 3.4.2.3 COMPARISON OF CURRENT LAND USES AND BUILDOUT

Buildout projections shown in Table 3-5 are used throughout this DEIR to estimate the magnitude of development that would likely occur in Corona and its SOI upon implementation of the General Plan Update to Year 2040. The table also shows the difference between potential growth and the amount of development as of 2018. Land use calculations are used to estimate the number of dwelling units, residents, square feet of nonresidential uses, and employees that would be generated by proposed land uses. These projections are then used to estimate how much noise, traffic, and other impacts would occur due to these changes.

As detailed in Table 3-5, *Buildout Statistical Summary, Corona and SOI*, the General Plan Update would result in a potential buildout total of 70,939 units, 241,928 residents, 82,191,657 nonresidential square feet, and 106,474 jobs in the City and SOI. Compared to existing conditions, the proposed project would result in an increase of 11,511 units, 39,298 residents, 26,476,352 nonresidential square feet, and 31,156 jobs in the City and its SOI.

Table 3-5 Buildout Statistical Summary, Corona and SOI

| Scenario | Acres | Units | Households | Population | Nonresidential Square Feet | Employment |
|---|---|---|---|---|---|---|
| Existing Conditions (2018) | | | | | | |
| City | 25,551 | 48,532 | 46,979 | 165,366 | 52,278,846 | 70,972 |
| SOI | 16,515 | 10,896 | 10,351 | 37,264 | 3,436,459 | 4,346 |
| Total | 42,066 | 59,428 | 57,330 | 202,630 | 55,715,305 | 75,318 |
| Proposed General Plan (2040) | | | | | | |
| City | 25,551 | 54,026 | 52,297 | 184,086 | 61,794,650 | 84,395 |
| SOI | 16,515 | 16,913 | 16,067 | 57,842 | 20,397,007 | 22,079 |
| Total | 42,066 | 70,939 | 68,364 | 241,928 | 82,191,657 | 106,474 |
| Difference | | | | | | |
| City | 0 | 5,494 | 5,318 | 18,720 | 9,515,804 | 13,423 |
| SOI | 0 | 6,017 | 5,716 | 20,578 | 16,960,548 | 17,733 |
| Total | 0 | 11,511 | 11,034 | 39,298 | 26,476,352 | 31,156 |

### 3.4.3 Proposed Climate Action Plan Update

The City of Corona is also proposing to update the City's CAP as part of the technical update to the General Plan. The CAP covers greenhouse gas (GHG) emissions and emissions reductions in the incorporated City of Corona and is included in Appendix C of this Draft EIR. The CAP identifies GHG reduction measures that allow the City to continue reductions consistent with the State's interim emissions reduction goal of lowering emissions 40 percent below 1990 levels by 2030 under Senate Bill 32 (SB 32) and long-term goal of 80 percent below 1990 levels by 2050 under Executive Order S-03-05. A straight-line projection from the

2030 to 2050 goals would result in a reduction goal of 66 percent below 2008 levels by 2040 midpoint, which corresponds to the General Plan horizon.

The CAP update focuses on developing reduction strategies to achieve the 2030 and interim 2040 reduction goals. A summary of the CAP Reduction Measures is shown in Table 3-7, *City of Corona Climate Action Plan Reduction Measures*.

Table 3-7 City of Corona Climate Action Plan Reduction Measures

| Goal | Measure |
|---|---|
| Goal 1: Increase Energy Efficiency in Existing Residential Units | 1.1: Energy Efficiency Training, Education, and Recognition in the Residential Sector |
| | 1.2: Increase Community Participation in Existing Energy Efficiency Programs |
| | 1.3: Home Energy Evaluations |
| | 1.4: Residential Home Energy Renovations |
| Goal 2: Increase Energy Efficiency in New Residential Units | 2.1: Exceed Energy Efficiency Standards |
| Goal 3: Increase Energy Efficiency in Existing Commercial Units | 3.1: Energy Efficiency Training, Education, and Recognition in Commercial Sector |
| | 3.2: Increase Business Participation in Existing Energy Efficiency Programs |
| | 3.3: Nonresidential Building Energy Audits |
| | 3.4: Nonresidential Building Retrofits |
| Goal 4: Increase Energy Efficiency in New Commercial Units | 4.1: Exceed Energy Efficiency Standards |
| Goal 5: Increase Energy Efficiency through Water Efficiency | 5.1: Water Efficiency through Enhanced Implementation of Senate Bill X7-7 |
| | 5.2: Exceed Water Efficiency Standards |
| Goal 6: Decrease Energy Demand through Reducing Urban Heat Island Effect per Title 24 Requirements | 6.1: Tree Planting for Shading and Energy Saving |
| | 6.2: Light-Reflecting Surfaces for Energy Saving |
| Goal 7: Decrease Greenhouse Gas Emissions through Reducing Vehicle Miles Traveled | 7.1: Alternative Transportation Options |
| | 7.2: Implement Bicycle Master Plan to Expand Bike Routes around Corona |
| Goal 8: Decrease Greenhouse Gas Emissions through Reducing Solid Waste Generation | 8.1: Reduce Waste to Landfills |
| Goal 9: Decrease Greenhouse Gas Emissions through Increasing Clean Energy Use | 9.1: Clean Energy |
| | 9.2: Join Community Choice Aggregate (CCA) Program |

Source: LSA 2019.

## 3.5 INTENDED USES OF THIS EIR

This is a program EIR that examines the potential environmental impacts of the proposed General Plan Technical Update and CAP Update. This DEIR also addresses various actions by the City and others to adopt and implement the General Plan and CAP. It is the intent of the DEIR to evaluate the environmental impacts of the proposed project, thereby enabling the City of Corona, other responsible agencies, and interested parties to make informed decisions with respect to the requested entitlements. The anticipated approvals required for this project are included in Table 3-8, *Project Approvals Needed*.

Table 3-8 Project Approvals Needed

| Lead Agency | Action |
|---|---|
| City of Corona City Council | • Certification of the Program EIR<br>• Adoption of the Corona General Plan Update<br>• Adoption of the Corona Climate Action Plan Update<br>• Adoption of the Findings of Fact and Statement of Overriding Considerations (if required)<br>• Adoption of the Mitigation Monitoring Program<br>• Adoption of any ordinances, guidelines, programs, actions, or other mechanisms that implement the Corona General Plan Update |
| **Responsible Agencies** | **Action** |
| Riverside County Local Agency Formation Commission (LAFCo) | • For reorganizations (annexations to the City) |
| Riverside County Airport Land Use Commission (Riverside County (ALUC) | • For airport-related policies |
| California Department of Forestry and Fire Protection (CAL FIRE) | • Review of the Public Safety Element for policies in state responsibility areas and very high fire hazard severity zones |
| County of Riverside | • For review of amendments and other discretionary actions needed to comply with the General Plan Update |

## 3.6 REFERENCES

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_____ 2018, June 26. County of Riverside General Plan, Temecula Canyon Area Plan (TCAP).

# 3. Project Description

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# 4. Environmental Setting

## 4.1 INTRODUCTION

The purpose of this section is to provide, pursuant to provisions of the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a "description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, from both a local and a regional perspective." The environmental setting will provide a set of baseline physical conditions that will serve as a tool from which the lead agency will determine the significance of environmental impacts resulting from the proposed project. In addition, subsections of Chapter 5, *Environmental Analysis*, provide more detailed descriptions of the local environment setting for the environmental topical areas. The extent of the potential physical impacts differs for each environmental topical area. Individual environmental topical sections expand on the cumulative context in which environmental impacts are analyzed.

For many of environmental impacts, the setting is contiguous with the boundary of the City and sphere of influence (SOI). However, some environmental topical sections—air quality, biological resources, greenhouse gas (GHG) emissions impacts and traffic—the setting is based on a larger, more regional context. Section 4.2, *Regional Environmental Setting*, below, expands on the environmental impacts where the regional environmental context plays a role in determining potential cumulative impacts. Section 4.4, *Assumptions Regarding Cumulative Environmental Impacts*, describes how the quantitative analyses for cumulative impacts used to analyze traffic, air quality, GHG emissions, and noise impacts.

## 4.2 REGIONAL ENVIRONMENTAL SETTING

### 4.2.1 Regional Location

The City of Corona is located in the northwestern portion of Riverside County, near the convergence of Los Angeles, Orange, and Riverside Counties, 45 miles southeast of the City of Los Angeles (see Figure 3-1 and Figure 3-1). Corona is located in a valley, framed by mountains and the Prado Basin. Original settlements focused development in an area within and adjacent to Grand Boulevard. The City is bordered by the City of Norco to the north, the City of Riverside to the east, and Riverside County to the west and south. The Cleveland National Forest to the south/southwest and the Prado Basin to northeast border the City; these natural areas are barriers to the future outward growth of Corona.

The City is uniquely defined in Riverside County by its transportation infrastructure. Two major freeways and one railroad transect Corona. The Riverside Freeway (SR-91) runs east-west directly north of the City's center; Interstate 15 (I-15) runs north-south near the eastern edge of the City. These corridors are major transportation routes to the economic center of Orange County from the Inland Empire. In addition, the Burlington Northern Santa Fe (BNSF) railroad transects the center of the community, running parallel to the

SR-91. Corona's convenient proximity to both freeways and rail infrastructure contributes to the City's growth and economic strengths; however, freeway traffic volumes are high, causing significant congestion and commuter "cut through" traffic on the city's local streets.

Two geographical areas are within the "planning area" covered by the Corona General Plan, the City's corporate limits (City), and its Sphere of Influence (SOI), which are depicted in Figure 3-3. As defined by the City and the Riverside County Local Agency Formation Commission (LAFCO), the SOI represents the logical service area of the city. Corona includes 39 square miles plus 32 square miles in its SOI. The SOI includes three geographically distinct areas to the west, east, and south of Corona's incorporated borders:

- The **West Sphere** encompasses the Prado Basin, Coronita, and the Foothill area.
- The **East Sphere** includes the areas of Home Gardens, Eagle Valley East, and El Cerrito.
- Temescal Canyon makes up the **South Sphere**.

## 4.2.2 Regional Planning Considerations

### Southern California Association of Governments

Riverside County and Corona are in a six-county metropolitan region composed of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG is the federally recognized metropolitan planning organization (MPO) for the region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the region's MPO, SCAG cooperates with the South Coast Air Quality Management District (SCAQMD), the California Department of Transportation (Caltrans), and other agencies in preparing regional planning documents. Western Riverside County and its local jurisdictions constitute the Western Riverside County subregion of the SCAG region. Land use and transportation planning in the Western Riverside County subregion is the responsibility of the Western Riverside County Council of Governments (WRCOG) which has developed a variety of plans to achieve specific regional objectives. The plans most applicable to the Corona General Plan Update are discussed below.

#### *Regional Transportation Plan/Sustainable Communities Strategy*

On April 7, 2016, SCAG adopted the 2016–2040 RTP/SCS, "Towards a Sustainable Future," which encompasses three principles, mobility, economy, and sustainability, that work as the key to the region's future. The 2016-2040 RTP/SCS provides a blueprint for improving quality of life for residents by providing more choices for where they will live, work, and play and how they will move around (SCAG 2016).

## South Coast Air Quality Management District

The City of Corona is within the South Coast Air Basin (SoCAB). Land use is subject to the rules and regulations imposed by the SCAQMD as well as the California ambient air quality standards (AAQS) adopted by the California Air Resources Board (CARB) and National AAQS adopted by the United States Environmental Protection Agency (EPA). The SoCAB is designated nonattainment for ozone ($O_3$) and fine inhalable particulate matter ($PM_{2.5}$) under the California and National AAQS, nonattainment for lead (Los Angeles County only) under the National AAQS, and nonattainment for coarse inhalable particulate matter ($PM_{10}$) under the California AAQS (CARB 2017a and EPA 2018).

SCAQMD is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with SCAG to attain the National AAQS. Since 1979, a number of AQMPs have been prepared. In March 2017, SCAQMD adopted the 2016 AQMP. Overall, the 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA. SCAQMD's 2016 AQMP forecasts that the SoCAB will need to increase $NO_x$ reductions by 45 percent additional reductions above existing regulations for the 2023 ozone standard and 55 percent additional reductions above existing regulations to meet the 2031 ozone standard (SCAQMD 2017).

## California Air Resources Board

Current State of California guidance and goals for reducing GHG emissions are generally embodied in Executive Order S-03-05 and B-30-15, Assembly Bill 32 (AB 32), Senate Bill 32 (SB 32), and Senate Bill 375 (SB 375). To achieve the emissions reductions of AB 32 and SB 32, the California Air Resources Board (CARB) prepared the 2017 Climate Change Scoping Plan. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ (million metric tons of $CO_2$ equivalent emissions) for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b).

If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved. In addition to these statewide strategies, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the state's long-term GHG reduction goals and identified local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends statewide targets of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050 (CARB 2017b).

## Regional Water Quality Control Board, Santa Ana River Basin Region 8

Under the Porter-Cologne Water Quality Act, California's water quality control law, the State Water Resources Control Board (SWRCB) has ultimate control over water quality policy and allocation of state water resources. The SWRCB, through its nine Regional Water Quality Control Boards (RWQCBs), carries out the regulation, protection, and administration of water quality in each region. Each regional board is required to

adopt a water quality control plan or basin plan. The City of Corona is located in the Santa Ana River Basin, Region 8.

#### *Santa Ana River Basin Plan*

The Water Quality Control Plan for the Santa Ana River Basin was last updated in 2019. This basin plan gives direction on the beneficial uses of the state waters within Region 8, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the basin plan.

### Western Riverside Multi-species Habitat Conservation Plan

The Western Riverside County Multi-species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional plan that addresses biological and ecological diversity by conserving species and associated habitats, while allowing approval of development in western Riverside County. It is administered by the Western Riverside County Regional Conservation Authority.

The MSHCP functions as a habitat conservation plan (HCP) pursuant to Section 10(a)(1)(B) of the FESA and as a natural community conservation plan pursuant to California's Natural Communities Conservation Planning Act. The MSHCP provides a framework for the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) to grant take authorization (i.e., incidental take permits) for species covered by the MSHCP that are Federal Endangered Species Act (FESA) and/or California Endangered Species Act (CESA) listed as threatened or endangered. Take of these species without a permit would be unlawful. The MSHCP covers 146 species, not all of which are FESA or CESA listed. However, mitigation for impacts to both listed and unlisted species may be required pursuant to CEQA or other regulatory processes, and the MSHCP's conservation area provides an avenue for this mitigation. Furthermore, if any of the unlisted covered species are subsequently listed, take authorization may be granted through the MSHCP framework.

The MSHCP was approved and permits issued in 2004 by the USFWS and the CDFW. The plan area encompasses approximately 1.26 million acres (approximately 1,967 square miles) in western Riverside County and addresses 146 sensitive plant and animal species and the vegetation communities on which they depend. Fourteen of these animal species and eleven plant species are designated by the USFWS as listed under FESA. Several of these species also have federally designated critical habitat in the MSHCP jurisdiction. The MSHCP encompasses the City of Corona along with many other city, county, and state entities. It should be noted that the listing status of plants and animals may change over time.

# 4.3 LOCAL ENVIRONMENTAL SETTING

## 4.3.1 Location and Land Use

The City of Corona encompasses 25,551 acres, and its SOI consists of an additional 16,515 acres, for a total of 42,066 acres across the entire plan area. A survey was conducted to identify existing land uses in the City of Corona and SOI. Data were derived from SCAG's existing land use database and the Department of

Finance (DOF), as updated with data from the City, field surveys, business license records, tax assessor files, and CoStar data. Table 3-1, *Existing Land Use Summary*, and Figure 3-3, *Existing Land Uses*, of Chapter 3, *Project Description*, provide a statistical summary of existing land uses in the City and SOI.

- **Residential**. Residential uses are grouped into single-family units, multiple-family units, and mobile homes. The land use pattern is different than the SOI, where residential land uses comprise a significantly smaller proportion of the total acreage.

- **Business and Commerce**. This includes a range of nonresidential uses primarily oriented to commerce. This includes airport, general commercial, office, industrial (including manufacturing), and mineral resource extraction. Agriculture, which is primarily grazing, is included under open space categories. This category also has the largest amount of building square footage.

- **Community Amenities**. These land uses are essentially amenities that contribute to the quality of life in the community. Community amenities include educational facilities, religious organizations, parks and recreation, and civic facilities. Educational facilities represent at least half the land uses in this category, with public facilities and institutional facilities comprising the remainder.

- **Open Space Resources**. Open space amenities include several categories—open space set aside for a variety of land uses and natural open spaces which can also be used for conservation easements or habitat. This category also includes agricultural uses, including those set aside for grazing.

### 4.3.2 General Plan and Zoning

Table 3-2, *Land Use Designations in the City*, and Figure 3-5, *Land Use Plan, City of Corona,* show 18 land use designations regulating development in the City. Table 3-2 also shows the implementing zones and permitted uses within these land use designations and implementing zones. Table 3-3, *Land Use Designations in the SOI,* and Figure 3-6, *Land Use Plan, Sphere of Influence Areas,* show 30 land use designations that regulate development in the SOI. Figure 4-1, *Existing Zoning, City of Corona,* and Figure 4-2, *Existing Zoning, Sphere of Influence,* show the zoning designations in the City and SOI.

### 4.3.3 Public Services and Utilities

Public services and utilities are provided in the City of Corona by providers listed in Table 4-1. Additional information describing the existing provision of services and utilities in the City is found in Sections 5.15, *Public Services*, and 5.19, *Utilities and Service Systems,* of this DEIR.

Table 4-1 Public Service and Utility Providers

| | |
|---|---|
| **Public Services** | |
| Police | City of Corona Police Department<br>Riverside County Sheriff's Department |
| Fire Protection and Emergency Medical Services | City of Corona Fire Department<br>Riverside County Fire Department<br>California Department of Forestry and Fire Protection (CAL FIRE)<br>United States Forest Service (USFS) |
| Public Schools | Corona-Norco Unified School District<br>Alvord Unified School District |
| Library | Corona Public Library<br>Home Gardens Branch Library (Riverside County Library System)<br>El Cerrito Branch Library (Riverside County Library System) |
| **Utilities and Infrastructure** | |
| Water | City of Corona Department of Water and Power<br>Temescal Valley Water District<br>Home Gardens County Water District<br>Eagle Valley Mutual Water Company |
| Wastewater Treatment | City of Corona Water and Power, Wastewater Division<br>Temescal Valley Water District<br>Home Gardens Sanitary District |
| Regional Flood Control | Riverside County Flood Control and Water Conservation District |
| Solid Waste Collection | County of Riverside Solid Waste Management Division |
| Solid Waste Disposal (Landfills) | El Sobrante Landfill<br>Frank R. Bowerman Landfill |
| Electricity | City of Corona Department of Water and Power<br>Southern California Edison |
| Natural Gas | Southern California Gas Company |

## 4.4 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed when a project's incremental effect is cumulatively considerable. It further states that this discussion shall reflect the level and severity of the impact and the likelihood of occurrence, but not in as great detail as that necessary for the proposed project alone. Section 15355 of the CEQA Guidelines defines cumulative impacts to be "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts represent the change caused by the incremental impact of the proposed project when added to effects of past projects, other current projects, and probable future projects in the vicinity.

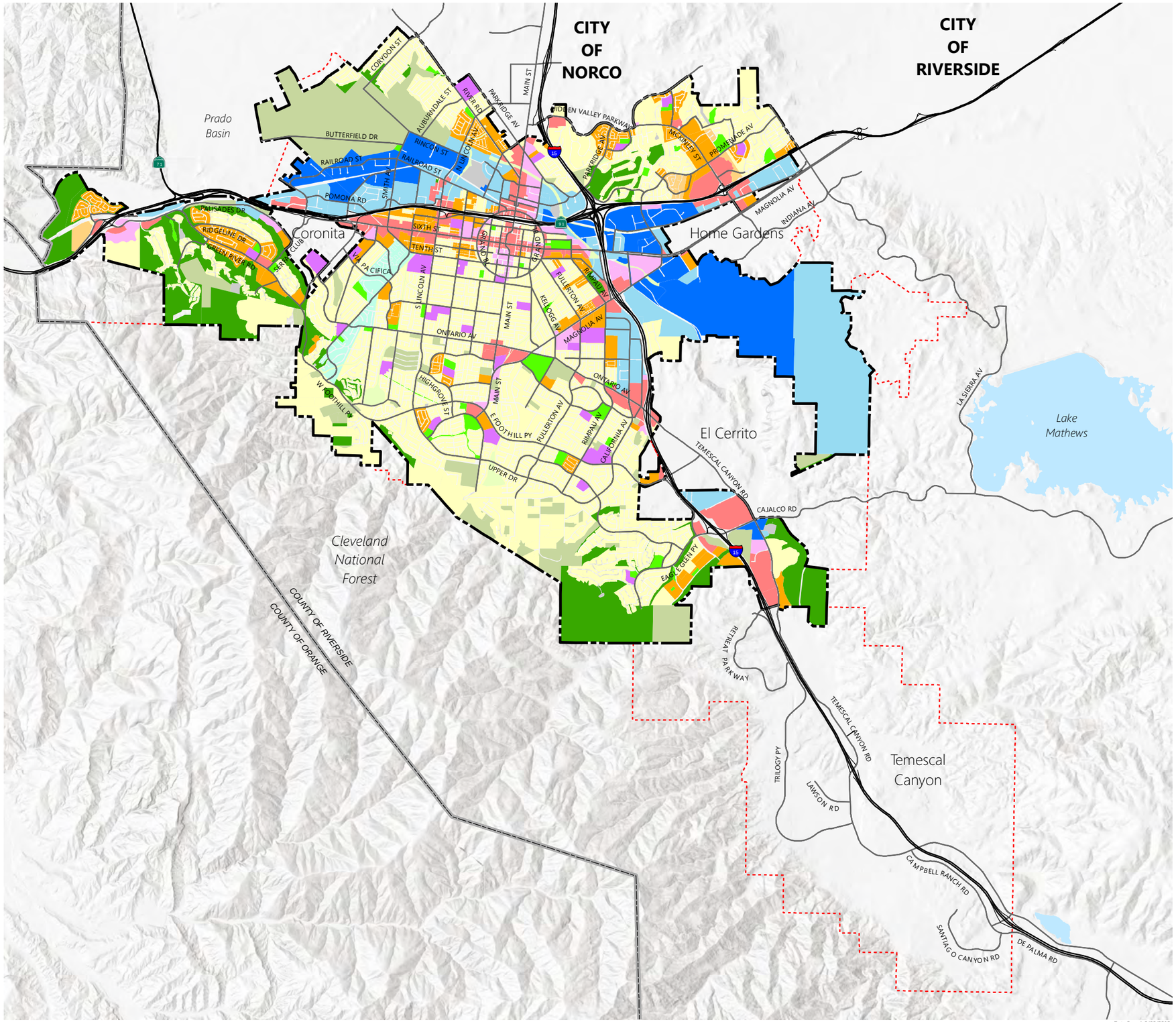


Figure 4-1

# EXISTING ZONING

## CITY OF CORONA

### Legend

- City Boundary
- Sphere of Influence Areas
- Rural Community - Estate Density Residential
- Rural Community - Very Low Density Residential
- Rural Community - Low Density Residential
- Estate Density Residential
- Very Low Density Residential
- Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Very High Density Residential
- Highest Density Residential
- Commercial Retail
- Commercial Tourist
- Commercial Office
- Community Center
- Light Industrial
- Heavy Industrial
- Business Park
- Public Facilities
- Rural Residential
- Rural Mountainous
- Agriculture
- Conservation
- Conservation Habitat
- Open Space Recreation
- Open Space Rural
- Water
- Mineral Resources
- City

*Source:*
*Riverside County 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

# 4. Environmental Setting

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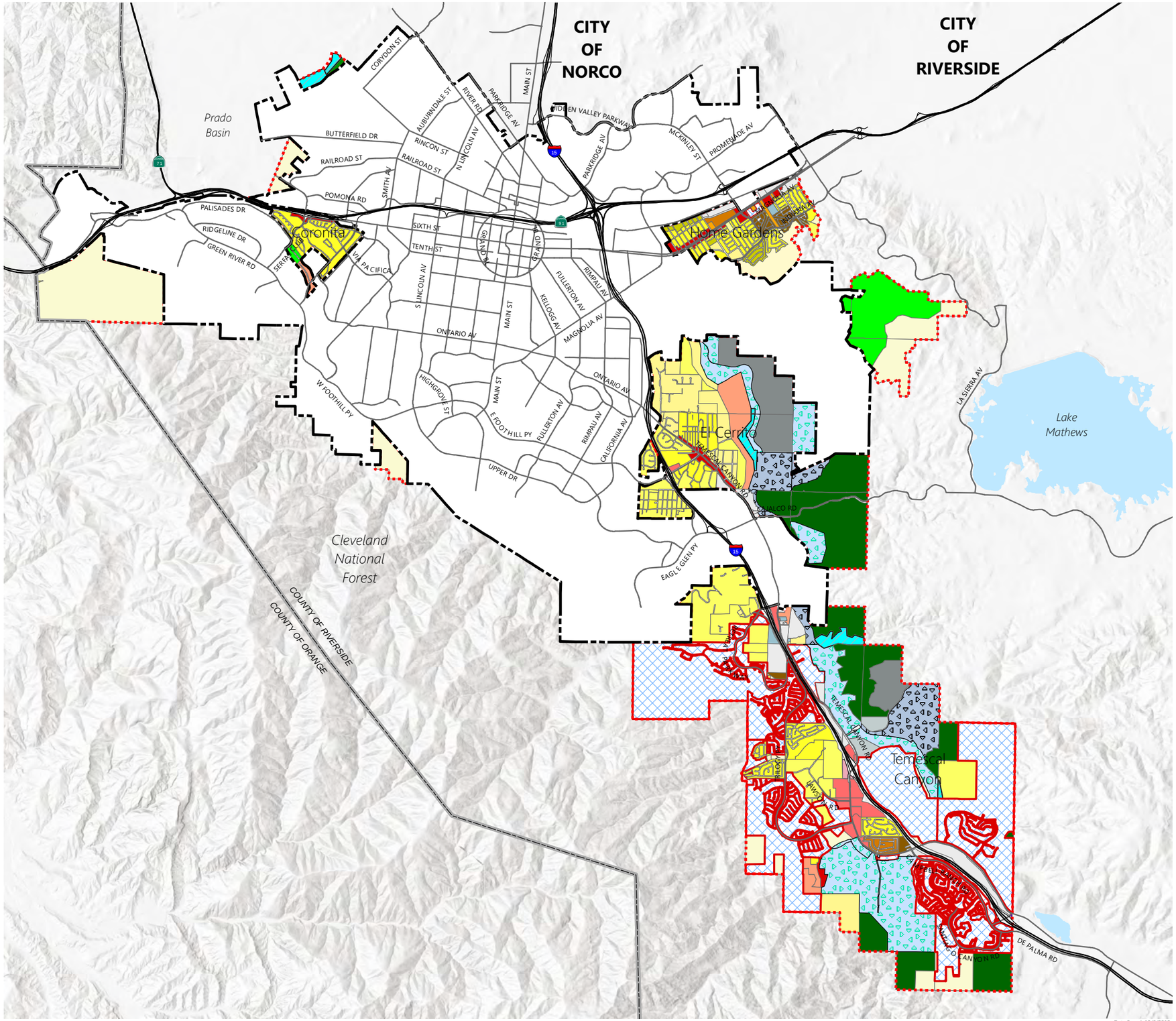


Figure 4-2

# EXISTING ZONING

## SPHERE OF INFLUENCE

### Legend

- City Boundary
- Sphere of Influence Areas

- A-1
- A-1-10
- A-2-5
- C-1/C-P
- C-O
- C-P-S
- C-T
- I-P
- M-H
- M-H-10
- M-M
- M-R
- M-R-A
- M-SC
- MU
- N-A
- R-1
- R-1-10000
- R-1-12000
- R-1-20000
- R-2
- R-3
- R-4
- R-5
- R-6
- R-A
- R-A-1
- R-A-10
- R-A-2
- R-A-2 1/2
- R-A-20000
- R-A-5
- R-R
- R-T
- SP ZONE
- W-1
- W-2
- W-2-10

*Source:*
*Riverside County 2019*

CORONA General Plan EIR

Miles
0 0.5 1 1.5 2

PLACEWORKS

# 4. Environmental Setting

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CEQA Guidelines Section 15130 (b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of two sources, either:

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

2) A summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions.

The cumulative impacts analyses in this DEIR use method No. 2. The proposed project consists of the Corona General Plan Update. Consistent with Section 15130(b)(1)(B) of the CEQA Guidelines, this DEIR analyzes the environmental impacts of developments in accordance with buildout of the proposed land use plan. As a result, this DEIR addresses the cumulative impacts of development within the City of Corona and the region surrounding it, as appropriate. In most cases, the potential for cumulative impacts is contiguous with the City boundary. Potential cumulative impacts that have the potential for impacts beyond the City boundary (e.g., traffic, air quality, noise) have been addressed through cumulative growth in the City and region. Regional growth outside Corona has accounted for traffic, air quality, and noise impacts through use of the Riverside County Congestion Management Program (CMP), which is a model that uses regional growth projections to calculate future traffic volumes. The growth projections adopted by the City and surrounding area are used for the cumulative impact analyses of this DEIR. Please refer to Chapter 5, *Environmental Analysis*, of this DEIR for a discussion of the cumulative impacts associated with development and growth in the City and region. A summary of the extent of cumulative impacts is also identified below:

- Aesthetics: Contiguous with the City of Corona and SOI boundary.
- Agricultural and Forestry Resources: Contiguous with the City of Corona and SOI boundary but considers regional resources.
- Air Quality: Based on the regional boundaries of the South Coast Air Basin.
- Biological Resources: Contiguous with the City of Corona and SOI boundary but considers regional habitat loss in the southern California region based on the range of the protected species.
- Cultural Resources: Contiguous with the City of Corona and SOI boundary.
- Energy: Based on energy use in the City and SOI boundary.
- Geological Resources: Contiguous with the City of Corona and SOI boundary.
- Greenhouse Gas Emissions: Based on the sectors in the Scoping Plan emissions in California (boundary).
- Hazards and Hazardous Materials: Contiguous with the City of Corona and SOI boundary.

- Hydrology and Water Quality: Hydrology and water quality impacts would be contiguous with the Upper Santa Ana Watershed and Middle Santa Ana River Groundwater Basin, and flood impacts would be contiguous with the City of Corona and SOI boundary.
- Land Use and Planning: Contiguous with the City of Corona and SOI boundary but considers regional land use planning based on SCAG.
- Mineral Resources: Contiguous with the City of Corona and SOI boundary.
- Noise: Contiguous with the City of Corona and SOI boundary.
- Population and Housing: Contiguous with the City of Corona and SOI boundary.
- Public Services: Contiguous with the service area boundaries of the Corona Fire Department, Riverside County Fire Department, CAL FIRE, and USFS; Corona Police Department, Riverside County Sheriff's Department; Corona-Norco Unified School District, Alvord Unified School District; and the Corona Public Library, Riverside County Library System.
- Recreation: Contiguous with the City of Corona and SOI boundary.
- Transportation & Traffic: Considers regional transportation improvements identified in the WRCOG subregional transportation model and regional growth projections identified by SCAG.
- Tribal Cultural Resources: Contiguous with the City of Corona and SOI boundary.
- Utilities and Service Systems: Water supply and distribution systems impacts would be contiguous with the service areas of Corona Department of Water and Power, Temescal Valley Water District, Home Gardens County Water District, and Eagle Valley Mutual Water Company; wastewater conveyance and treatment would be contiguous with the service areas of Corona Department of Water and Power, Wastewater Division, Temescal Valley Water District, and Home Gardens Sanitary District; storm drainage systems would be contiguous with the Riverside County Flood Control District service area; solid waste collection and disposal services would be contiguous with the County of Riverside Solid Waste Management Division service area; natural gas and electricity services would be contiguous with the Southern California Gas Company and Southern California Edison service areas, respectively.
- Wildfire: Contiguous with the service area boundaries of the Corona Fire Department, Riverside County Fire Department, CAL FIRE, and USFS.

## 4.5 REFERENCES

California Air Resources Board (CARB). 2017a, December 19. Area Designations Maps/State and National. http://www.arb.ca.gov/desig/desig.htm.

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# 4. Environmental Setting

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# 5. Environmental Analysis

Chapter 5 examines the environmental setting of the proposed project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter has a separate section for each environmental issue area that was determined to need further study in the EIR. This scope was determined based on public and agency comments received during the Notice of Preparation (NOP) comment period from August 14 through September 14, 2018, and during the Scoping Meeting held on August 30, 2018, (see Appendix B). Environmental issues and their corresponding sections are:

- 5.1 Aesthetics
- 5.2 Agriculture and Forestry Resources
- 5.3 Air Quality
- 5.4 Biological Resources
- 5.5 Cultural Resources
- 5.6 Energy
- 5.7 Geology and Soils
- 5.8 Greenhouse Gas Emissions
- 5.9 Hazards and Hazardous Materials
- 5.10 Hydrology and Water Quality
- 5.11 Land Use and Planning
- 5.12 Mineral Resources
- 5.13 Noise
- 5.14 Population and Housing
- 5.15 Public Services
- 5.16 Recreation
- 5.17 Transportation
- 5.18 Tribal Cultural Resources
- 5.19 Utilities and Service Systems
- 5.20 Wildfire

Sections 5.1 through 5.20 provide a detailed discussion of the environmental setting, impacts associated with the proposed project, and mitigation measures designed to reduce significant impacts where required and when feasible. The residual impacts following the implementation of any mitigation measure are also discussed.

## Organization of Environmental Analysis

To assist the reader with comparing information between environmental issues, each section is organized under 10 major headings:

# 5. Environmental Analysis

- Environmental Setting
- Thresholds of Significance
- Relevant General Plan Policies
- Environmental Impacts
- Cumulative Impacts
- Existing Regulations and Standard Conditions
- Level of Significance Before Mitigation
- Mitigation Measures
- Level of Significance After Mitigation
- References

In addition, Chapter 1, *Executive Summary,* has a table that summarizes all impacts by environmental issue.

## Terminology Used in This Draft SEIR

The level of significance is identified for each impact in this DEIR. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

- **No impact.** The project would not change the environment.

- **Less than significant.** The project would not cause any substantial, adverse change in the environment.

- **Less than significant with mitigation incorporated.** The EIR includes mitigation measures that avoid substantial adverse impacts on the environment.

- **Significant and unavoidable.** The project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less than significant level.

# 5.1 AESTHETICS

This section of the draft environmental impact report (DEIR) discusses the potential impacts to the visual character of the City of Corona and sphere of influence (SOI) from implementation of the General Plan Update and Climate Acton Plan Update. This section includes a discussion of the qualitative aesthetic characteristics of the existing environment that would potentially be altered by the project's implementation and the consistency of the project with established relevant policies. Cumulative impacts related to aesthetics would be contiguous with the City and SOI boundaries.

## 5.1.1 Environmental Setting

### 5.1.1.1 REGULATORY FRAMEWORK

Visual resources in Corona and its SOI are regulated primarily through the California Department of Transportation (Caltrans) (for highways) and the Corona General Plan and Municipal Code. Key state and local regulations follow.

#### State Laws

##### *Caltrans Scenic Highway Program*

In 1963, California's Scenic Highway Program was created to preserve and protect the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The state laws governing this program are in the Streets and Highways Code, Sections 260 to 2684, and Caltrans oversees the program. Caltrans defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. Suitability for designation as a State Scenic Highway is based on three criteria described in Caltrans's Guidelines for Official Designation of Scenic Highways (2008):

- **Vividness.** The extent to which the landscape is memorable. This is associated with the distinctiveness, diversity, and contrast of visual elements.
- **Intactness.** The integrity of visual order and the extent to which the natural landscape is free from visual intrusions (e.g., buildings, structures, equipment, grading).
- **Unity.** The extent to which development is sensitive to and visually harmonious with the natural landscape.

#### Local Laws

##### *Corona Design Guidelines*

Citywide design guidance is primarily provided through two documents—Residential Development Design Guidelines and Industrial Development Design Guidelines. Additionally, adopted specific plans for certain areas of the city have design guidelines for that planning area. To complement the emphasis on building design, the City also adopted landscape design guidelines for commercial, industrial, and residential use. The guidelines accompany mandatory site development regulations in the zoning ordinance and specific plans. These

documents also provide procedural guidance for applicants and guidelines for City staff in reviewing and approving designs and verifying compliance.

### *Residential and Industrial Development Design Guidelines*

Residential and industrial development design guidelines are references for architects and designers for building quality projects that add value to the community. The guidelines complement the site development regulations in the City's zoning ordinance and specific plans. They encourage the highest level of design quality while providing flexibility to encourage design creativity and innovation to accommodate difficult or unusual site design situations. Architectural and planning guidelines support Corona's goals and objectives for promoting high-quality development.

Residential design guidelines apply to all new residential projects, individual custom homes, and additions to historic homes. An important goal of the single-family site guidelines is to create functional and visual variety along streets. For multifamily development, design should focus on maximizing open space by clustering units into small neighborhood groupings to maintain a pedestrian environment. The guidelines cover planning topics such as lot widths, orientation, setbacks, garage placement, and street layout. Architectural topics include façade and roof articulation, structure design, scale, walls and fences, materials, windows, doors, and equipment screening.

Similarly, the industrial architectural and landscape design guidelines provide guidance for planning and architecture features with the goal of providing for well-designed, attractive, quality industrial development. The guidelines identify key features of architecture and site design elements that are important to the City. The document also provides examples of desirable architectural design methods and building characteristics. Other considerations such as parking, loading, outdoor storage, entrance design, signs, and lighting are covered.

### *Landscape Design Guidelines*

Landscaping is also an important part of the city's built environment. Well-designed landscaping can assist in softening the impact of developments and creating a more human-scale environment. Residential, commercial, and industrial landscape design guidelines were adopted by the City in 2010 with the goal of creating pleasant and attractive properties throughout the city. They are intended to promote a sense of community, create a more pleasant living and working environment, and promote water and resource conservation.

The City's current landscaping guidelines cover a range of topics, including design features, planting plan requirements, drainage, and irrigation. When reviewing plans, the City will consider the proposed combination of water-conserving trees, shrubs, subshrubs, vines, groundcover, and accent lighting. Additionally, projects are encouraged to use low-impact development methods, including porous paving, stormwater cisterns, extensive bioswales, and roof gardens. Hardscape site amenities may include boulders, recycling fountains, walls, art/sculptures, fences, and benches.

The City has also established landscape assessment districts to maintain streetscapes, lighting, parkways, and medians. These districts primarily cover neighborhoods in south, west, and northeast Corona.

### *Specific Plans*

The city has adopted numerous specific plans that provide community identity and development standards for specific areas in the city. In most cases the specific plan is the guiding and governing document for certain areas and includes development regulations similar to those found in the city's Zoning Ordinance.

### *Corona Zoning Ordinance*

The City's Municipal Code, Title 17, Zoning, provides provisions to guide development in a way that maintains the city's community character and visual resources in each of the land use districts. The zoning ordinance regulates density, design, height, and setbacks for each of the zoning districts. In addition, the zoning ordinance provides minimum standards for landscaping (Chapter 17.70, Landscaping, Fences, Walls, and Hedges) and signage (Chapter 17.74, Signs).

#### *Hillside Grading Ordinance*

The City has supplemental regulations in areas with a slope of 15 percent or greater as part of Corona's Hillside District (Chapter 17.59, Hillside District ) in order to .

- Encourage development clustering that contributes to the provision of view corridors.
- Encourage development design that reflects the distinct environmental and topographical characteristics of the land.
- Encourage the clustering of development on the most gently sloping portions of the site.
- Encourage innovative architectural, landscaping, circulation, and site design.
- Discourage mass grading of large pads and excessive terracing except where soils stability dictates grading and recompacting for public safety.
- Provide for safe circulation of vehicular and pedestrian traffic to and within hillside areas and adequate access for emergency vehicles.
- Encourage design and building practices to ensure maximum safety from wildfire hazard.

## 5.1.1.2 EXISTING CONDITIONS

### Community Character

Corona is characterized by its lush and diverse landscape, which can be seen from freeway entries, neighborhoods, industrial parks, and historic districts. The intensity and scale of the city's greenery is most evident when viewing the city from a distance, where the trees appear as an urban forest. The city's primary entry at 6th Street is well marked with street trees and signage at the I-15 and SR-91. The City has established landscape assessment districts to maintain streetscapes, lighting, parkways, and medians. These districts primarily cover neighborhoods in south, west, and northeast Corona. Community landscape may be best

appreciated from Green River Road, Ridgeline Drive, Foothill Parkway, Upper Drive, Promenade Avenue, McKinley Street, and the south side of Hidden Valley Parkway.

Corona's structure, form, and character can be categorized into four types—the historic core, residential neighborhoods, commercial and mixed-use nodes, and industrial corridors. These types are used to generally categorize development throughout the area by physical features such as character, form, and structure.

- **Historic Core.** The heart of Corona's historic core is Grand Boulevard, a circle street that is three miles in circumference, a mile in diameter, and 100 feet wide. Varieties of ornamental trees along its periphery create a sense of place and identity. Unifying urban design elements in the historic core—landscaping and street lights, compatible building heights, and walkable blocks—complement the historic buildings. Two principal thoroughfares, Main Street (north-south) and 6th Street (east-west), intersect at the center of the circle. The 91 freeway and railroad tracks cross Grand Boulevard to the north; Magnolia Avenue runs diagonally through central Corona. Inside the circle, a grid of pedestrian-oriented, rectangular blocks and streets create neighborhoods and small commercial nodes. Most residential neighborhoods consist of single-family and low-density multifamily homes, most of which are accessed by a rear alley. Somewhat larger, odd-shaped lots—along the periphery and facing Grand Boulevard—created the opportunity for the stately homes that give this area its historic residential feel. Historic homes meet contemporary buildings along Main and 6th, the commercial core of this area. Corona Regional Medical Center, medical and professional offices, the library, and the Corona Mall make up this commercial node. The surrounding neighborhoods contain historic homes of varying vintages, and the streets and frontages are pedestrian in scale.

- **Residential Neighborhoods.** Typical of southern California suburban subdivisions, most of Corona's suburban neighborhoods contain single-family detached units, with some clusters of duplexes, townhomes, condominiums, and apartments. The architecture largely echoes design styles used throughout the region, with Spanish and Mediterranean influences, surfaced with stucco, and painted in earth tones. Dedicated common open space creates opportunities for community gathering spaces. Suburban neighborhoods are generally toward the periphery of the historic core, south of Ontario Avenue, west of Lincoln Avenue, and in the northeast and northwest corners of the city. Residential areas outside the historic core show a typical suburban neighborhood form—inward orientation of housing on cul-de-sacs and curvilinear streets. Community-serving commercial centers exist at major street intersections of the primary entries and in most neighborhoods. Typically, these contain a mix of auto-oriented, local-serving retail and convenience uses with a major anchor tenant. Generally, buildings are set back from the street with ample parking between the building and street frontage.

- **Commercial and Mixed-Use Nodes.** In addition to neighborhood commercial centers, Corona has a number of commercial nodes that serve as major employment centers in addition to meeting local and regional shopping needs. These nodes make up the areas of 6th Street and Main Street, Magnolia Avenue and I-15, Ontario Avenue and I-15, Cajalco Road and I-15 (The Crossings), and Dos Lagos just south of the Crossings. These areas are a mix of retail, commercial, service, and office uses, depending on the location. Many of Corona's commercial nodes are characterized by large parcel sizes and deep lots of varying sizes. Site design is similar for the large and small parcels—typically buildings are at the rear of the

property, and surface parking is provided between the structures and street frontage. The older commercial shopping centers and office/business complexes developed during the postwar boom as independent, auto-oriented destinations with limited continuity in design, architectural articulation, landscape, or amenities. Few pedestrian walkways or public spaces provide internal connectivity. Big-box buildings are occasionally broken by freestanding pads for business along frontages.

- **Industrial Corridors.** There are two major industrial corridors in the city. The first is a broad corridor that parallels SR-91 and the railroad across the north-central part of the city. It begins at the Prado Basin and extends east to the I-15/SR-91 interchange and south to Ontario Avenue. The second industrial corridor is in Temescal Valley along I-15. These corridors include large parcels developed within a larger, "super-grid" network of streets and contain industrial uses with variable physical form and quality. Older industrial uses typically consist of large, box-like buildings with limited architectural treatment. Many sites are not landscaped or have minimal decorative screening or walls, and the area lacks unifying design elements.

## Visual Resources

Corona is situated on a river plain and is bounded on three sides by mountains—the Santa Ana Mountains, Gavilan Hills, and Chino Hills—which dominate most viewsheds in the city. Additionally, the Temescal Wash bisects the city. This intersection of mountains, valleys, and plains creates a visually dynamic landscape of varying shapes, colors, and textures. These resources are described below.

### *Scenic Mountain Views*

Scenic mountain views surround Corona. To the west and south are the Chino Hills and the Santa Ana Mountains. The Cleveland National Forest, composed of evergreen native chaparral, is considered a scenic resource for the community. The surrounding mountains are the dominant natural feature in most views, providing a dramatic visual contrast to the flat topography in the city.

Surrounding mountains also frame views of the city from its freeway entries. These views are visible from the eastbound approach into the city from SR-91. SR-91 runs through the Santa Ana Canyon, and its viewshed near the western portion of the city is bounded by the Chino Hills on the north and the foothills of the Santa Ana Mountains on the south, with the narrow gap between these hills framing the first visual impression of the city. The Chino Hills then turn abruptly northward, the Santa Ana Mountain foothills trend southeast, and the gap between the two frames a wide vista that includes Prado Basin, with the foothills of the San Bernardino Mountains as a backdrop.

### *Scenic City Views*

Roads that traverse Corona provide scenic views of the city, its hillsides, and environs. SR-91 meanders through the Santa Ana Canyon and provides views of the Cleveland National Forest and Chino Hills. I-15 extends south through Temescal Canyon between the Cleveland National Forest and Gavilan Plateau, providing panoramic views of the valley floor and surrounding hills. Cajalco Road, which extends eastward from Temescal Canyon to Mead Valley over the Gavilan Plateau, is also eligible for designation as a county scenic corridor.

Significant views of Corona are also visible from I-15 as it descends from the Norco Hills north of the city, providing a grand entrance into Corona. Significant views of the city can be found from many ridges and peaks surrounding the city as well as from within the canyons of the surrounding mountain ranges. Wide-open vistas associated with these natural features dominate the visual image of the city.

### *Scenic Corridors*

Figure 5.1-1, *Scenic Corridors*, shows the location of scenic highways in Corona. The scenic highway plan of the City of Corona is a composite of vistas, activity centers, corridors and pathways, edge areas, and entry and approach areas. The plan provides for the establishment, development, and protection of the city's highways and corridors for scenic purposes. The plan includes the following elements:

- **Scenic corridors.** Visible land area outside the highway right-of-way; generally described as the view from the road.
- **Rural designated scenic highway.** A route that traverses a defined corridor within which natural scenic resources and aesthetic values are protected and enhanced.
- **Urban designated scenic highway.** A route that traverses a defined visual corridor that offers an unhindered view of attractive urban scenes.
- **Unique functions of a scenic highway.** Views for enjoyment of highway users, visual relief from urban development, connection between activity centers, city identification, and accents to entranceways and special areas of the City.

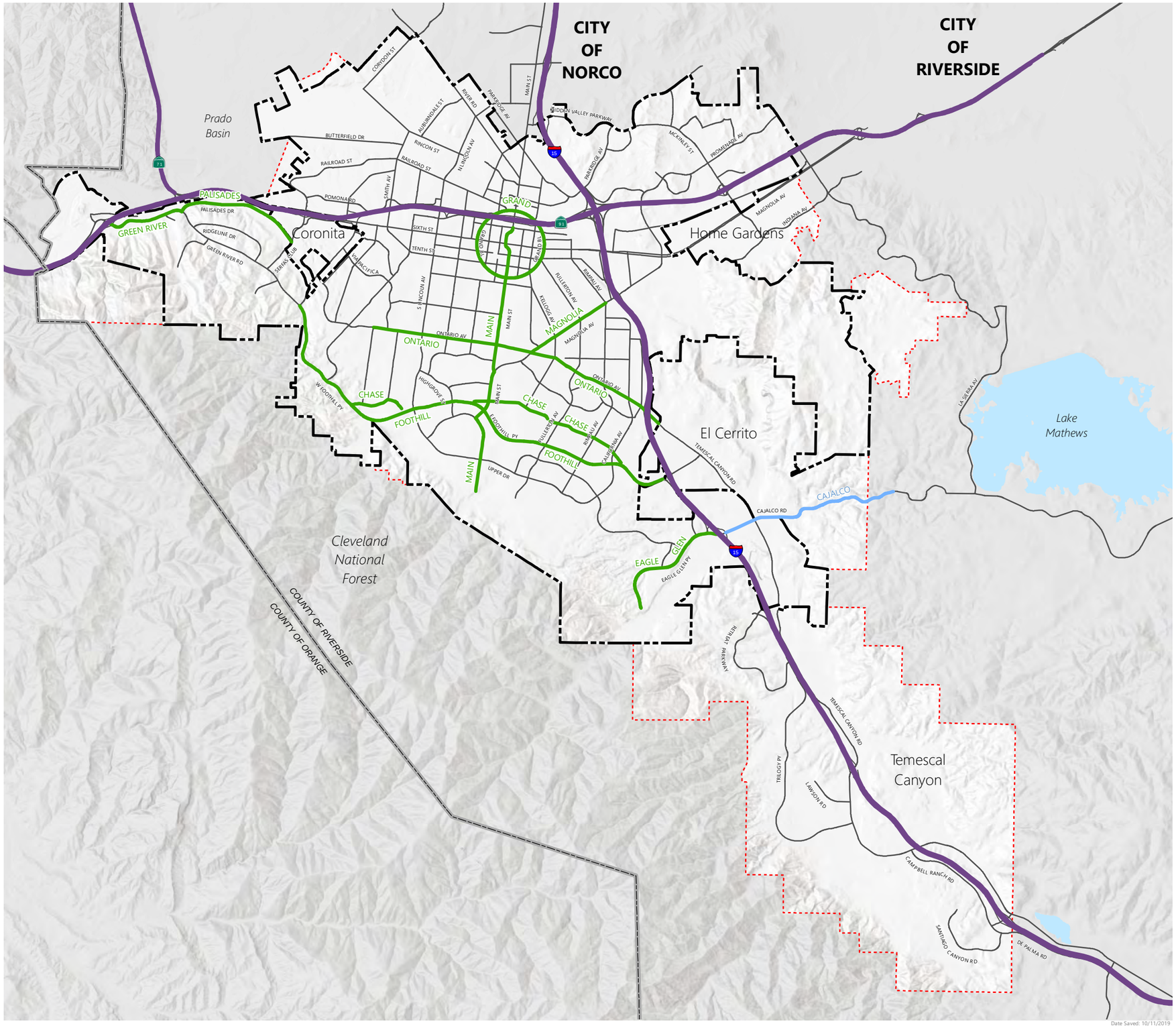


Figure 5.1-1

# SCENIC CORRIDORS

## Legend

- City Boundary
- Sphere of Influence Areas
- City Designated Scenic Corridors
- County Eligible Scenic Corridors
- State Eligible Scenic Corridors

Date Saved: 10/11/2019

*Source:*
*Corona 2017*
*County of Riverside 2017*
*CalTrans, 2016*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

# 5. Environmental Analysis
## AESTHETICS

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Table 5.1-1, *Scenic Corridors in Corona*, lists the scenic corridors in Corona and SOI.

Table 5.1-1 Scenic Corridors in Corona

| Scenic Corridors | Location |
|---|---|
| **Local Corridors** | |
| Grand Boulevard | Views of the city's historic core, particularly historic residential estates along the edge of the Circle, and mature trees in the parkway |
| Main St, from 3rd St to southern terminus | Views of the city's historic core, the Santa Ana Mtns to the west and south, and the low foothills of the San Bernardino Mtns to the east |
| Ontario Avenue, from Mangular to State St | Views of the Santa Ana Mountains to the west and the low foothills of the San Bernardino Mountains to the east |
| Chase Dr from Foothill Pkwy to Spring Meadows Dr [1] | Views of the Santa Ana Mountains to the west and the low foothills of the San Bernardino Mountains to the east |
| Foothill Pkwy, from Paseo Grande to Bedford Canyon Rd[2] | Views looking north to the Prado Basin on the west and the hills and valleys leading toward the San Bernardino Mountains in the north and east |
| Magnolia, from Ontario Ave to Rimpau Ave | Views of the Santa Ana Mountains and the narrow pass between the San Bernardino Mountain foothills at the northwest end of the city |
| Green River Rd, from SR-91 to Palisades Dr[1] | Views of a narrow canyon. |
| Palisades Dr, from Green River to Serfas Club Dr[1] | Views of the narrow canyon. |
| Eagle Glen Pkwy, from I-15 to southern terminus[1] | Views of the City from the top of the east slope of Eagle Glen. |
| **State and County Corridors** | |
| State Route 71 | State Route 71 traverses on the east side of the Chino Hills, offering view of preserved hillsides on western edge of Chino Hills State Park |
| SR-91 and I-15 | The SR-91 offers views of the Santa Ana Canyon (SR-91) and the Norco/Corona Hills; I-15 offers view of Temescal Valley |
| Cajalco Road | Cajalco Road is a County-eligible scenic corridor that extends eastward from the I-15 at the city's border up to the Gavilan Plateau. |

Source: Corona 2004; Riverside County 2015

Note:

[1] New local scenic corridors under the General Plan Update.

[2] Foothill Westerly extension was not designated a scenic corridor in the 2004 General Plan, but under the General Plan Update the route is designated as a local

### *Prominent Scenic Vistas*

Corona benefits from a wide variety of scenic vistas. The wide-open vistas are associated with natural features that dominate the visual image of the city. Internally, the visual elements of major arterials, such as Grand Boulevard, provide unique vistas that characterize individual neighborhoods. Significant vistas include:

- The **Prado Basin** views from Sierra del Oro, which encompass the basin on the south and canyon areas on the west.

- The view south to the **Santa Ana Mountains** from the I-15/SR-91 freeway interchange.
- The southern view of the **foothills** from major north-south streets south of Ontario Avenue.
- The views of the San **Gabriel Mountains** from the higher elevations south of Ontario Avenue.

Eagle Glen in eastern Corona provides views of scenic vistas in the city. Eagle Glen Parkway runs along the top of the west slope of Eagle Glen. Another scenic road is Palisades Drive/Green River Road south of the SR-71/SR-91 interchange. This corridor passes through a narrow canyon slot. Views from South Corona, including Ontario Avenue and Foothill Boulevard that traverse the higher slope areas, provide views looking north. This includes the Prado Basin on the west and the hills and valleys leading to the San Bernardino Mountains in the north and east.

Residents who live on the wildland-urban interface often have direct canyon and mountain views from their residences. Residents who live north of the airport and to the east of Prado Basin in northwest Corona have views into the basin and further south to the mountains behind the city. The Prado Basin is also dramatic and densely covered by trees adapted to its moist environment. Its green mass is best seen from Sierra del Oro, Highway 71 near its intersection with SR-91, and from the industrial and residential areas flanking the basin in the northwest quadrant of the city.

### Light and Glare

Sources of light and glare in the city and SOI include building (interior and exterior), security, sign illumination, and parking-area lighting. Other sources of nighttime light and glare include street lights and vehicular traffic along surrounding roadways. Because the city is adjacent to urbanized cities, including Norco and Eastvale to the north, ambient light in the community is impacted by the adjacent land uses. However, Corona is also guarded from excessive light spillover by Prado Basin to the northwest and Cleveland National Forest to the west, which have few sources of light, allowing for clear day and nighttime views. Similarly, to the east and south of the city are the communities that make up the SOI, including Home Gardens, El Cerrito, and Temescal Canyon, which include vacant land and natural open space that allow for clear day and nighttime views.

## 5.1.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, "except as provided in Public Resources Code Section 21099," a project would normally have a significant effect on the environment if the project would:

AE-1 Have a substantial adverse effect on a scenic vista.

AE-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

AE-3 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 point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

AE-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

## 5.1.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, whose implementation may reduce potential aesthetics impacts.

### Land Use Element

#### *Community Quality and Sense of Place*

##### *Community Form and Character*

- **LU-5.1** Promote development and revitalization of neighborhoods, commercial and industrial districts, and public places that are distinguished by their physical design, image, effectiveness in nurturing community socialization and economic activity, and perception as valued places.

- **LU-5.2** Promote development patterns and structures that recognize and maintain the historic character of recognized heritage properties and those that have potential to become eligible for historical significance.

- **LU-5.3** Distinguish the city's neighborhoods and districts in their character and physical appearance by considering their physical and visual separation, edge and entry treatment, architecture, landscape, streetscape, and comparable elements during their design and development.

- **LU-5.4** Encourage preparation of Specific Plans for large vacant lands planned for residential, commercial, industrial, or mixed-use purposes, or for the re-use of existing multiple properties where the intent is to establish a cohesive district.

##### *Green Open Spaces and Landscaping*

- **LU-5.5** Enhance Corona's system of parks, greenways, and open spaces by linking these and surrounding natural areas, including along the Temescal Creek, with pedestrian trails and greenways where feasible.

- **LU-5.6** Require the submittal and approval of landscape plans for all development projects consistent with adopted ordinances and guidelines; encourage sustainable practices for landscape materials, design, irrigation, and maintenance.

- **LU-5.7** Require property owners and tenants to maintain landscaping, remove weeds, and replace unhealthy or dead landscape; enforce landscape maintenance through proactive enforcement.

- **LU-5.8** Encourage developers to incorporate mature, specimen trees and other significant landscaping that may exist on the site into the design of the project.

*Design and Development*

- **LU-5.9** Require adherence to the design and development guidelines as subsequently stipulated by this plan's policies for each land use district, as well as implementing ordinances and specific plans.

- **LU-5.10** Promote quality development through site design, architectural elements, and landscaping characteristics that make Corona a desirable place to live and work and respond to the local context.

- **LU-5.11** Require projects to implement appropriate building orientation, setbacks, buffering, privacy, and vehicle access as well as mitigate potential impacts associated with noise and lighting in order to be compatible with adjacent land uses.

- **LU-5.11** Require that development in neighborhoods, districts, and other community activity centers be designed to accommodate public gatherings and pedestrian activity.

- **LU-5.13** Require that new master-planned residential subdivisions incorporate parks, greenways, and open spaces as character-defining amenities for their residents, emphasizing the retention of natural landforms and important plant communities.

*Building Quality and Maintenance*

- **LU-5.14** Support the conservation, maintenance, and upgrading of housing, commercial buildings, and historic structures through education, technical and financial assistance, and partnerships.

- **LU-5.15** Require that new and rehabilitated structures be designed, built, and maintained in a manner that promotes their physical longevity, and at the same time provide architectural details consistent with the City's design guidelines and other applicable codes and ordinances.

- **LU-5.16** Maintain proactive code enforcement and nuisance abatement programs to ensure that properties in Corona's residential neighborhoods and business and service districts are properly maintained in order to preserve the quality and appearance of developed properties, making the city a desirable place to reside and/or conduct commerce .

- **LU-5.17** Promote and support community efforts for the renovation of structures and facilities; work with local organizations to educate residential, commercial, industrial, and institutional property owners and tenants regarding property maintenance..

- **LU-6.1** Promote sustainable features in new construction and significant renovations, including the use of locally sourced, recycled, and sustainable-sourced building materials, energy- and water-efficient building design, integrated renewable energy and energy storage systems, and waste minimization during construction.

- **LU-6.2** Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through:

- Site design—concentration and intermixing of development to minimize vehicular trips and promote walking and building orientation for solar access and heat gain and loss
- Landscaping—drought-tolerant species, use of recycled water for irrigation, and other purposes
- Capture of rainwater and re-use on site
- Building design and construction materials—energy-and water efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques

### *Residential Neighborhoods*

#### *General Residential*

- **LU-7.1** Accommodate the development of a diversity of residential housing types that meet the needs of Corona's population in accordance with the Land Use Plan's designations, applicable density standards and design and development policies, and the adopted housing element.
- **LU-7.2** Promote the development of innovative forms of housing that increase the diversity and affordability of units to meet the needs of the population, such as mixed-use that integrate housing with commercial and other uses, live/work structures, loft housing, and other similar housing types.
- **LU-7.3** Allow for the development of accessory dwelling units and other similar uses in appropriate residential zones, provided that parking, design, building and safety, and other neighborhood regulations comply with State statutory requirements and local regulations.
- **LU-7.4** Allow for the integration of land uses within residential neighborhoods that support and are complementary to their primary function as living environments, including but not limited to: schools, parks, trails, community centers, community meeting facilities, and other comparable uses that provide supporting services.
- **LU-7.5** Allow for home occupations in Corona's residential neighborhoods that do not diminish the quality and character of the neighborhood and update the city's home occupation ordinance in accordance with state adopted legislation for certain home based businesses.
- **LU-7.6** Allow for the development of family day care facilities, appropriately sized childcare centers, and small residential care facilities (as defined by the State of California) subject to compliance with regulations in state law and the municipal code.
- **LU-7.7** Require that single-family detached and attached housing be well designed in a manner that will enhance and maintain a high level of neighborhood quality in consideration of the following principles:
    - Avoidance of "box-like" structures through the articulation and modulation of building elevations and masses.

- Variation of rooflines and architectural design treatment of all elevations that are visible from public places.
- Use of entries and windows on street-facing elevations to visually "open" the house to the neighborhood.
- Minimize the use of paving for driveways and parking areas in front yard setbacks.

- **LU-7.8** Require that new multi-family residential projects be designed to convey a high level of visual and physical quality and distinctive neighborhood character in consideration of the following principles:
  - Architectural treatment of building elevations and modulation of mass to convey the character of separate units, avoiding the sense of a singular building mass.
  - Design of parking areas integral with the architecture of the residential portions of the structure, including its style, materials, colors, and forms.
  - Incorporation of usable and functional private open space for each residential unit
  - Incorporation of common open space that creates a pleasant living environment while providing attractive locations for recreation.
- **LU-7.9** Encourage the attractive treatment of front yards and other areas in residential neighborhoods that are visible from the street, including limits on the area that may be paved for parking or other uses.
- **LU-7.10** Require that fencing and walls in residential neighborhoods achieve high aesthetic and safety standards considering the following principles:
  - Fencing and walls should not obstruct vehicle sight lines and create hazards for pedestrians and bicyclists.
  - Fencing and walls should be compatible with or complement the architectural design of nearby structures.
  - Fencing and walls shall be regularly maintained, repaired, and kept in excellent condition
  - Fencing and walls should make a positive contribution to the character of the neighborhood.

***Existing Neighborhoods***

- **LU-8.1** Promote the conservation of existing residential neighborhoods, permitting the infill of housing that is compatible in density and scale with existing uses, except where densities may be increased as depicted on the land use plan or as permitted by state law.
- **LU-8.2** Provide opportunities for the development of new housing adjacent to the Downtown and the Sixth Street corridor, which may include a variety of housing types, including mixed use projects, that integrate housing with commercial and office uses.

- **LU-8.3** Provide opportunities for housing that are in pace with adopted state legislation and allow for a variety of housing types such as integrating residential with commercial and office developments, near activity centers and in transit oriented areas near the Metrolink Station.

- **LU-8.4** Provide opportunities for "live-work" development to accommodate artists, craft persons, and professionals working from home as a buffer between residential and nonresidential uses in Downtown, North Main Street, and adjoining commercial and industrial corridors and districts.

- **LU-8.5** Promote development and enhancement of places that serve as the focal point of identity and activity in neighborhoods through the integration and, where feasible, consolidation of parks, schools, community facilities, religious facilities, and similar uses.

- **LU-8.6** Encourage the rehabilitation and relocation of historic homes slated for demolition to other appropriate sites in the City; encourage the rehabilitation of homes that will soon become eligible for historic designation due to their age, integrity, and significance.

- **LU-8.7** Require that new single-family homes constructed in existing neighborhoods be designed to complement existing structures in their property setbacks, scale, building materials, and color palette, and exhibit a high quality of architectural design.

- **LU-8.8** Require multi-family units built within mixed density residential neighborhoods to be designed to convey a single-family character incorporating well-defined entrances, modulated building masses and facades, and extensive site landscape.

- **LU-8.9** Discourage replacement of existing housing with substantially larger and massive structures where the existing home is in good physical condition and the new construction would deviate significantly in scale and character than their surroundings.

- **LU-8.10** Require that building and site alterations and additions are compatible in scale and design with existing homes and neighborhood character, respect the privacy of nearby homes, and preserve solar access and views.

- **LU-8.11** Discourage the gating of existing residential neighborhoods unless there are overriding public safety concerns that would require gating to be installed.

- **LU-8.12** Require that nonresidential uses be located and designed to maintain the quality and character of the neighborhood and prevent traffic, noise, odor, lighting, and other adverse impacts on adjoining housing units.

- **LU-8.13** Promote the maintenance and upgrade of existing residential neighborhoods through proactive code enforcement and financial incentive and technical assistance programs, where appropriate and feasible.

- **LU-8.14** Encourage and support homeowners' associations and local groups in the conduct of neighborhood "cleanup" days where assistance is provided for removal of debris, painting, and other property improvements.

*New Neighborhoods*

- **LU-9.1** Accommodate the development of new residential neighborhoods in areas depicted by the land use plan and growth and development policy plan that contain a diversity of housing and supporting schools, parks, and other amenities.

- **LU-9.2** Promote the development of master planned communities that integrate a diversity of housing, parks, schools, trails, open spaces, and other elements into a distinct place. Require a development pattern that ties together parcels into a cohesive whole addressing the location and massing of buildings, architecture, landscape, pedestrian trails, key landmarks, and similar elements.

- **LU-9.3** Encourage the integration of a mix of housing types into new residential neighborhoods, which may include single-family homes, townhomes, row houses, live-work, and multi-family units to the extent the integration is appropriate and complements surrounding land uses.

- **LU-9.4** Design the distribution of residential land uses to avoid the overconcentration of multi-family units by limiting their number in any single location and providing for their dispersal throughout the neighborhoods.

- **LU-9.5** Establish and locate a focal point of identity and activity within walking distance of all housing in new residential neighborhoods that may consist of a school, community meeting facilities, parks, nonresidential areas with public facilities, and similar uses.

- **LU-9.6** Support the development of public uses that offer the opportunity for the sharing of facilities such as the integration of school play fields and athletic fields with public parks, public and school libraries, and multi-purpose facilities.

- **LU-9.7** Site and design new residential developments to enhance neighborhood quality by:

  - Establishing a network of streets and pedestrian paths that promote neighborhood activity, internal access, and connectivity to surrounding areas.

  - Enhancing the visual quality and character of street frontages through extensive landscape and reduction of the visual dominance of garages.

  - Promoting architectural diversity for residential, commercial, and other supporting uses consistent with established design guidelines.

  - Varying heights and rooflines of new development (residential, commercial, etc.) along the street frontages to allow for visual interest.

- **LU-9.8** Require that multi-family development abutting single-family housing units incorporate setbacks, step down in height and mass as it approaches lower density areas, and incorporate other design elements to ensure an appropriate transition between the uses.

- **LU-9.9** Require that residential neighborhoods be designed to ensure visual and physical compatibility among their various uses, as well as adjoining neighborhoods, commercial and industrial districts, and open spaces.

- **LU-9.10** Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.

- **LU-10.1** Accommodate the development of low-density single-family housing that reflects and maintains the rural character of Corona's foothills and canyons, in accordance with the land use plan's designations, density standards and design and development policies.

- **LU-10.2** Require that development projects be located and designed to maintain predominant topographic forms, contours, and elevations in the city's foothills and canyons.

- **LU-10.3** Minimize the removal of native landscape and integrate with new residential development, to the extent feasible and practical for fire control; require adherence to building construction and site designs necessary to minimize risks from wildfire, such as implementation of fuel modification areas, concrete tile roofs and boxed eaves.

- **LU-10.4** Require that new development and major rehabilitations be located, designed, and built to maintain natural drainages, riparian vegetation, and the viability of habitats, except as necessary to protect from flooding or wildfire, or that impacted areas be properly mitigated.

- **LU-10.5** Establish community design standards that reflect the rural character such as the use of wood or stone fences, limited sidewalks, extensive street landscape, low levels of street lighting, and similar techniques.

- **LU-10.6** Establish a multi-use trail system that connects the rural and estate neighborhoods adjoining open spaces and parklands. These may be developed for pedestrians, bicycles, and/or for horseback riding where allowed by zoning.

- **LU-10.7** Within hillside areas, allow for the clustering of homes where it contributes to the preservation of open spaces and hillsides, conforms to the distinct environmental and topographical characteristics of the land, and achieves other community goals.

- **LU-10.8** Require geotechnical studies for development proposed in the hillsides, within close proximity to the Elsinore Fault Zone, and other areas known for potential seismic and geologic hazards to identify areas requiring appropriate safeguards.

### *Commercial and Office Districts*

- **LU-11.1** Encourage a comprehensive range of retail, service, and other commercial uses in the city that provide goods and services to meet the diverse needs of Corona's residents and businesses, in accordance with the land use plan's designations and applicable density standards and design and development policies.

- **LU-11.2** Maintain a range of retail commercial and office uses and districts in the city that are differentiated by their functional role, customer base, and physical form and character. Such districts include:

  - Mixed-use Downtown that serves as the center of Corona's identity and activity; provides a wide range of retail, commercial, and specialty goods; and is designed and developed to emphasize pedestrian activity.

  - Community retail districts that contain larger-format uses, national retailers, restaurants, and overnight accommodations, that serve the region and the local community, generally located in proximity to freeway off-ramps.

  - Neighborhood shopping districts providing basic goods and services, such as grocery stores and personal services, within easy access and that are intended to serve the needs of residents living in nearby neighborhoods.

- **LU-11.3** Promote reinvestment in declining shopping centers and districts, with an emphasis on new retail uses that serve adjacent neighborhoods and contribute to the overall vitality of the centers.

- **LU-11.4** Maintain appropriate areas in the city for heavy commercial uses. While development standards in these areas should respect operational characteristics of these uses, they should promote aesthetic improvements and traffic safety and minimize impacts.

- **LU-11.5** Regulate the extent, location, and design of drive-thru and "big box" commercial uses to ensure their compatibility with the functional role and character of adjoining land uses while addressing the operational needs of such commercial uses.

- **LU-11.6** Require that transit-supporting facilities, such as bus turnouts, passenger drop-offs, and shelters, be incorporated in new commercial centers or when subject to major renovation and improvement, where appropriate to support local, citywide, and regional transit systems. The location and type of facility should be coordinated with transit agencies.

- **LU-11.7** Regulate the location and number of alcohol sales, adult business, game arcade, and other "community-sensitive" uses based on proximity to other such uses, residences, schools, parks, and religious facilities, consistent with State statutory requirements.

- **LU-11.8** Require that new development within commercial and business districts be designed to convey a high quality of architectural and site quality in consideration of the following principles:

- Architectural treatment and modulation of all building elevations, including ancillary facilities such as storage.
- Incorporate extensive windows to promote visual transparency of building elevations facing sidewalks and public spaces.
- Modulation and articulation of building elevations to provide visual interest and character.
- Clear identification of building entries through design elements and integration of signage with the architectural character of the building.
- Screening and visual integration of rooftop mechanical equipment.
- Extensive use of landscape that provides a three-dimensional character.
- Clearly delineated pedestrian connections between the business use and parking areas (e.g., paving treatment, landscape separation).

- **LU-11.9** Require that new development of multi-tenant commercial and office projects be designed to convey a unified and high-quality character in consideration of the following principles:
  - Avoidance of sense of single building volume and mass through modulation, articulation, setbacks, and other techniques.
  - Consistent architectural design vocabulary, building articulation, materials, and colors.
  - Linkage of individual storefronts and structures through common pedestrian walkways, plazas, and other open spaces that provide amenities for customers.
  - Variation of building heights and rooflines to avoid uninterrupted planes and promote visual interest.
  - Architectural treatment of parking structures consistent and integrated with commercial and business buildings.
  - Provision of pedestrian connections to off-site pedestrian areas, where appropriate.
- **LU-11.10** Require that large-footprint single commercial uses ("big box") be designed to exhibit a high level of architectural quality and avoid the sense of undifferentiated and continuous building elevations through the use of modulated building volumes, façade articulation, fenestration, well-defined entries, pedestrian plazas, and similar techniques.
- **LU-11.11** Promote the renovation of existing commercial and office centers in accordance with the design and development principles defined by Policies LU-11.11–LU-11.13, emphasizing the inclusion of plazas, sidewalks, streetscape, and other improvements to enhance their character as pedestrian-gathering places, when property owners invest in major redevelopment of their properties.

- **LU-11.12** Require that commercial projects abutting residential neighborhoods be designed and buildings located to prevent conflicts and ensure an appropriate interface with adjoining housing in consideration of the following principles:
  - Reduction of building heights and modulation of mass and volume of the building in proximity to the adjacent housing.
  - Inclusion of landscape and attractively designed walls as buffers to mitigate noise, provide privacy, and serve as a visual amenity between the commercial and residential uses.
  - Design of building elevations facing residential properties to ensure privacy of adjoining housing.
  - Control of the location of commercial truck access, loading, parking, and comparable functions in proximity to adjoining housing or other sensitive land uses.
  - Design of on-site and building lighting to prevent spillover, glare, and adverse illumination of adjoining residential properties.
- **LU-11.13** Require that entertainment, drinking establishments, and similar uses incorporate physical and operational measures to prevent adverse impacts and ensure safety for adjoining residential properties.
- **LU-11.14** Require that a commercial site's vehicular access and parking be located and designed to prevent adverse impacts on adjoining residential uses.

### *Industrial Districts*

- **LU-12.1** Accommodate existing and new manufacturing, research and development, professional office, and similar uses in accordance with the land use plan's designations and applicable density standards and design and development policies.
- **LU-12.2** Allow for the development and integration of businesses and services that support and are ancillary to the primary industrial function and employee needs (e.g., production support, financial institutions, business services, restaurant).
- **LU-12.3** Discourage the development of industrial uses that are land extensive, generate few job opportunities, and contribute little revenue for the City.
- **LU-12.4** Encourage the reuse of underutilized, vacant, or obsolete industrial buildings with higher value uses that are consistent with the goals and policies of the General Plan.
- **LU-12.5** Work proactively with property owners of declining industrial sites to facilitate upgrades and re-use for contemporary business uses. Such may include incentives for parcel consolidation to facilitate the development of cohesive and well-defined business parks.

- **LU-12.6** In accordance with City industrial design guidelines, require that new and renovated industrial properties and structures be designed to achieve a high level of quality, distinctive architecture, and be compatible with adjoining uses in consideration of the following principles:
  - Modulation of building volumes and masses and façade articulation to avoid blank or unarticulated façades.
  - Architectural treatment of all building elevations to minimize sense of monotonous and undifferentiated walls.
  - Inclusion of courtyards, plazas, and other uses that serve as amenities for employees.
  - Signage should be attractive; consistent; well designed and proportioned; and carefully located to enhance the character of the use of the district or site.
  - Extensive landscaping of open spaces.
  - Service and utility areas, including loading docks, storage areas, mechanical systems, and trash bins, shall be screened from view and integrated into the design of a project and enclosed
  - Enclosure of storage areas with decorative screening or walls.
  - Location and design of driveways to minimize conflicts with adjoining uses and shield from public view to the extent practically feasible.
  - Mitigation of noise, odor, lighting, vibration, and other impacts.
- **LU-12.7** Regulate the development of industrial uses (consistent with local regulation and state law) that use, store, produce, or transport toxic and hazardous materials; generate unacceptable levels of air or noise pollution; or result in other adverse impacts.
- **LU-12.8** Require that heavy industrial uses incorporate landscaped setbacks, screening walls, berms, downward focused lighting fixtures, and/or other appropriate elements that mitigate visual and operational impacts on adjoining land uses.
- **LU-12.9** Require that heavy truck and vehicle access for industrial land uses be effectively placed and managed to ensure that it is safe and efficient for the present use and that it minimizes noise, odor, vibration, traffic, queuing back onto streets or existing or adjacent properties, and other safety impacts on adjoining uses.

### *Mixed-Use Districts*

- **LU-13.1** Accommodate mixed-use projects that integrate housing with retail, office, and other uses within the same structure or on the same site, or the development of the property exclusively for commercial and office uses in accordance with the land use plan's designations and applicable density standards and design and development policies.

- **LU-13.2** Limit retail commercial and professional office uses within a mixed-residential-commercial/office use development to those uses that are compatible with residential uses.

- **LU-13.3** Require that adequate open space and, for larger projects, recreational facilities be incorporated into mixed-use development projects to meet the need of their residents and improve overall aesthetics.

- **LU-13.4** Require mixed use projects be implemented through a specific plan to provide for cohesive and integrated development of commercial uses and housing or industrial/commercial/office uses in accordance with the principles herein and to ensure compatibility with adjoining uses.

- **LU-13.5** Require that commercial uses be located along the street frontage where sites are developed for mixed-use projects, with housing on the upper levels or to the rear of the commercial uses.

- **LU-13.6** Require that mixed-use projects be designed to convey a high level of architectural and landscape quality; ensure compatibility of commercial and residential uses in consideration of the following principles:

  - Incorporate elements to avoid conflicts among functions, such as noise, lighting, and other factors.
  - Visual and physical integration of the commercial and residential uses.
  - Architectural treatment of building elevations and modulation of their massing.
  - Incorporation of separate and well-defined entries for commercial uses and residential units.
  - Design of parking areas and facilities to be architecturally consistent and integrated with commercial and residential uses.
  - Incorporation of extensive site landscape, where feasible.

- **LU-14.1** Accommodate development of mixed-use projects that integrate industrial, commercial, and/or office uses on the same site or within a unified corridor, or the development of the property exclusively for light industrial (without commercial) in accordance with the land use plan's designations, density standards, and design/development policies.

- **LU-14.2** Limit the industrial uses to those that are compatible with commercial and office development, emphasizing nonpolluting light industries, such as research and development, e- commerce, high technology, and related uses.

- **LU-14.3** Require that a Specific Plan be approved for mixed use projects that provides for cohesive and integrated development of industrial and commercial uses in accordance with the principles stipulated herein and to ensure compatibility with adjoining uses.

- **LU-14.4** Require that mixed-use projects be designed to convey a high level of architectural and landscape quality and ensure compatibility among commercial and industrial uses in consideration of development and design policies stipulated independently for these uses.

### *Public and Institutional Uses*

- **LU-15.1** Accommodate existing schools, parks, government, fire and police facilities, utility, and institutional uses suited to serving the local needs of Corona residents and business in accordance with the land use plan's designations and applicable design and development policies.

- **LU-15.2** Allow for the development of new schools, parks, government, fire and police facilities, utility, and institutional uses in any location of the City, regardless of the land use plan's designation, provided the use is environmentally suitable and compatible with adjoining land uses, and adequate infrastructure can be provided.

- **LU-15.3** Promote collaborative and creative solutions between the public and private sectors to develop additional schools, parks, and other public facilities in the City and sphere of influence.

- **LU-15.4** Ensure that the City's public buildings, sites, and infrastructure are designed to be compatible in scale, mass, character, and architecture with the district and neighborhood in which they are located and pertinent design and development characteristics specified by this plan.

- **LU-15.5** Encourage non-City public agencies to design their structures and improvements to achieve a high level of visual and architectural quality and complement adjoining uses.

- **LU-15.6** Promote the consolidation of public uses in new residential communities—for example, the integration of parklands, schools, libraries, and community meeting facilities to enable them to serve as a centerpiece of community identity, as well as to maximize the efficient use of land.

- **LU-15.7** Strive to incorporate best practices in sustainability (including water conservation, energy conservation, groundwater filtration, and other similar techniques) into the design and development of public and institutional buildings.

### *Open Spaces*

- **LU-16.1** Accommodate open spaces that can be used for recreation and conserved to protect significant plant and animal habitats and population from the risks of flood, fire, and seismic hazards in accordance with the designations of the land use plan.

- **LU-16.2** Require the dedication of additional open spaces in new residential subdivisions and other applicable development, where necessary, to preserve the natural topography, plant and animal habitats, and flooding and drainage corridors in accordance with subsequent policies of this plan.

- **LU-16.3** Protect viewsheds by prohibiting the placement of electrical transmission lines, substations, and other types of overhead or at grade heavy infrastructure into public open space or other sensitive areas.

- **LU-16.4** Design improvements constructed in public open spaces to reflect their natural environmental setting in form, materials, and colors and to ensure compatibility with adjoining residential, commercial, and industrial uses.

- **LU-16.5** Require that improvements required to be placed in open space areas (e.g., reservoirs, lighting, and other infrastructure) be designed to minimize the impact on the landscape, avoid obstructing viewsheds, and be shielded to the extent feasible by landscaping, trees, and other natural forms.

- **LU-16.6** As a requirement for new development, ensure the financing, planning, design, and construction of parkland as required by the Quimby Ordinance, community needs, and consistent with the parks, recreation, and education element.

- **LU-16.7** Work with Corona Fire, CAL FIRE and Forest Service and with property owners in affected areas to reduce and minimize the hazards associated with wildfire in the hillsides and open spaces, consistent with the goals and policies of the safety element.

### *Opportunity Districts and Sites*

#### ***Downtown Corona***

- **LU-17.1** Accommodate a mix of commercial, office, entertainment, civic, cultural, housing, and similar uses in accordance with the land use plan's designations and applicable density standards and design and development policies, as may be precisely defined by specific plan.

- **LU-17.2** Allow for the development of a mix of housing types as well as senior housing to enhance the customer base and promote walking to Downtown uses and activities.

- **LU-17.3** Promote innovative redevelopment activities as feasible and supporting programs for business retention and proactive recruitment of new businesses to stimulate the revitalization of the Downtown.

- **LU-17.4** Promote the development of community-oriented, cultural, and live/ theatrical performance uses, building on the Civic Center's current role as the centerpiece of arts and culture.

- **LU-17.5** Accommodate public gatherings, festivals, and other special events in public places, such as parks and the community center

- **LU-17.6** Promote and support the redevelopment of the Corona Mall and adjacent properties into a central attraction within the Downtown Core, with a mix of supporting land uses.

- **LU-17.7** Ensure that new Downtown development is attractive and creates an image conducive to economic revitalization consistent with the adopted specific plan.

- **LU-17.8** Maintain the generally small scale, "village-like" character of Downtown's buildings, avoiding large "box-like" structures or developments and renovations of buildings that are inconsistent with the character of adjacent land uses.

- **LU-17.9** Promote the consolidation of individual lots for the development of cohesive and well-designed commercial and mixed-use projects that maintain the area's character of low-rise and pedestrian-oriented buildings with distinctive storefronts.

- **LU-17.10** Locate and design commercial and civic structures and sites to achieve a pedestrian-oriented environment that serves as a centerpiece of community activity.

- **LU-17.11** Require that commercial uses be designed to exhibit a high level of architectural and site quality in accordance with the principles defined by Policies LU-11.11 through LU-11.13.

- **LU-17.12** Require that mixed-use projects that integrate commercial uses with housing be designed to exhibit a high level of quality in accordance with the principles defined by Policy LU-13.6.

- **LU-17.13** Ensure that multi-family housing conveys high quality visual character, exemplified by modulated building masses, articulated facades, separate or well-defined entries for each unit, extensive landscape, and on-site amenities in accordance with principles defined by Policy LU-7.8.

- **LU-17.14** Promote the development of more cohesive and uniform patterns of housing types and densities in the Downtown, avoiding the "hodge-podge" appearance that currently exists on some streets.

- **LU-17.15** Enhance the historic character of the Downtown by requiring new construction to implement architectural features reminiscent of the era.

- **LU-17.16** Identify and promote Downtown's historic housing and support the rehabilitation and preservation of existing homes of historic significance.

- **LU-17.17** Promote the heritage of historic structures and sites by encouraging the placement of markers and supporting financial incentives. (need Implementation measures)

- **LU-17.18** Promote the development of centralized parking facilities that can be shared by multiple businesses to allow for a more pedestrian and social environment in Downtown.

- **LU-17.19** Consider limiting the vehicle right-of-way along key corridors within the Downtown, substituting right-of-way formerly dedicated to vehicles to routes for pedestrians and bicyclists.

- **LU-17.20** Retrofit and improve existing streetscapes with pedestrian improvements, sidewalks, specialty pavements, benches, and other features to encourage walkability.

- **LU-17.21** Enhance the visual character, pedestrian activity, and distinct identity for Downtown streets with elements such as trees, plantings, benches, trash receptacles, sidewalk and crosswalk paving, signage, pedestrian-scaled lighting, entry identification, public art, and comparable improvements.

- **LU-17.22** Incorporate extensive landscaping treatments to Downtown street corridors with elements such as tree planting with mature trees, planters, landscaped gateways, and other similar techniques to beautify and create a downtown ambience.

- **LU-17.23** Support the ongoing improvement of commercial and residential properties in the Downtown through programs of education, financial assistance, and partnerships with local businesses, organizations, and nonprofits.

- **LU-17.24** Maintain proactive code enforcement and nuisance abatement programs to sustain the quality of development and character of the Downtown.

- **LU-17.25** Repair, upgrade, and maintain the quality of public streets and sidewalks in the Downtown to encourage pedestrian activity, improve roadway safety, and beautify streets.

- **LU-17.26** Promote and work with local business organizations to establish an annual calendar of events that attracts residents and visitors Downtown.

- **LU-17.27** Work with law enforcement officials to maintain a visible presence to enhance and maintain the safety of Downtown for residents, visitors, and business.

*North Main Street*

- **LU-18.1** Accommodate commercial retail, service commercial, business park, industrial, and mixed uses in accordance with the land use plan's designations, applicable density standards and design and development policies, and adopted specific plan.

- **LU-18.2** Prioritize the development of professional offices and supporting uses, including the possible intensification of these uses in areas appropriate for such uses.

- **LU-18.3** Provide opportunities for intensified office, commercial, and mixed-use development that integrate housing with commercial and office uses in proximity to the Metrolink station.

- **LU-18.4** Support redevelopment and other programs for business retention and proactive recruitment of businesses to stimulate revitalization of the North Main Street corridor.

- **LU-18.5** Promote high quality architectural and landscape design of new construction and renovated buildings in accordance with Policies LU-11.11–LU-11.13 for commercial projects, LU-12.6 and LU-12.9 for industrial projects, and LU-13.5-LU-13.6 for mixed-use projects.

- **LU-18.6** Encourage the use of diverse and eclectic architectural design styles, varying building forms and geometries, combinations and juxtapositions of exterior materials and finishes, and the use of climatically sensitive building elements.

- **LU-18.7** Incorporate streetscape improvements that establish a distinct identity and character for North Main Street (entries, signage, paving, lighting, landscape, public art, etc.).

- **LU-18.8** Provide pedestrian and multi-modal transportation connections and improvements that link North Main Street uses to the Metrolink station.

- **LU-18.9** Encourage the renovation or rehabilitation of existing buildings, developments, and shopping centers to generate economic activity, support adjacent residential neighborhoods, and improve the visual environment of the area.

*East Sixth and Magnolia Avenue Corridors*

- **LU-19.1** Consider expansion of land uses that contain modern industrial uses, that integrate a mix of clean industrial uses with supportive land uses adjacent to or within a campus environment.

- **LU-19.2** Promote the development of sites for any of these uses individually or integrated as a cohesive mixed-use project that creates economic synergy and contributes job opportunities for residents.

- **LU-19.3** Promote the consolidation of small, underutilized lots, or irregularly shaped parcels into larger parcels that are conducive to and supportive of viable and more cohesive development projects.

- **LU-19.4** Require that a specific plan be prepared for mixed-use projects that provides for cohesive and integrated development of industrial and commercial in accordance with the principles stipulated herein and to ensure compatibility with adjoining uses.

- **LU-19.5** Require that mixed-use projects be designed to convey a high level of architectural and landscape quality and ensure compatibility among commercial and industrial uses in consideration of the design and development policies set forth independently for these uses.

- **LU-19.6** Maintain a comprehensive streetscape, lighting, landscaping, and signage improvement program that will improve aesthetics and property values along the Sixth Street corridor; promote increased landscaping fronting properties where deficient.

- **LU-19.7** Encourage the renovation or rehabilitation of existing buildings and sites to improve the quality, appearance, and overall value of the East Sixth Street and Magnolia Avenue corridors.

- **LU-19.8** Support improvement of industrial properties through education, financial assistance (e.g., CDBG grants and low-interest loans), and partnerships with local businesses, organizations, and nonprofits.

- **LU-19.9** Maintain proactive code enforcement and nuisance abatement efforts to sustain quality of development, address nonconforming land uses, and improve the character of the area.

*Eagle Valley*

- **LU-20.1** Allow for the development of high technology, biomedical, research and development, and comparable light industrial uses that provide job opportunities for Corona's residents in accordance with the land use plan and applicable density, design and development policies.

- **LU-20.2** Develop uses concurrent with the establishment of a transportation corridor that provides access from Cajalco Road.

- **LU-20.3** Require that a Specific Plan be prepared for mixed-use industrial and commercial projects that provides for cohesive and integrated development of commercial uses in accordance with the principles stipulated herein and to ensure compatibility with adjoining uses.

- **LU-20.4** Require that mixed-use projects be designed to convey a high level of architectural and landscape quality and ensure compatibility among commercial and industrial uses in consideration of Development and Design policies stipulated independently for these uses.

- **LU-20.5** Require that development be located and designed to preserve substantial open spaces onsite that account for its topography and serve as transitions to surrounding open spaces.

- **LU-20.6** Locate and design development to complement and assure its compatibility with the potential Metropolitan Water District (MWD) water treatment facility, if developed.

#### *Cajalco Road / Interstate 15*

- **LU-21.1** Allow for the conversion of the vacant site to a master-planned mixed-use community, in accordance with the land use plan's designation and applicable design and development policies.

- **LU-21.2** Allow for the development of urban uses on the property that complement adjoining residential neighborhoods, commercial districts, and open spaces, with the type and density of uses determined through the formulation and processing of a specific plan.

- **LU-21.3** Require that any development on the site be designed to reflect its topographic setting and natural resources.

- **LU-21.4** Require that development be located and designed to ensure adequate transitions with surrounding open spaces and natural areas.

### *Sphere of Influence*

#### *Annexation*

- **LU-22.1** Coordinate with the County of Riverside, landowners, and pertinent service agencies to ensure that development within the SOI complements, does not adversely compete with, or negatively impact the fiscal viability of Corona.

- **LU-22.2** Ensure that annexations to the City of Corona are consistent with the goals and policies of the general plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

- **LU-22.3** Require that existing and proposed development within proposed annexation areas generate sufficient tax or other revenue base to compensate for their fair share of community services that are provided by the City of Corona.

- **LU-22.4** Require that infrastructure and service improvements for proposed annexation areas do not create an undue burden on existing City of Corona infrastructure and services.

- **LU-22.5** Encourage that, if an area annexes to the City of Corona, a community facilities district or similar financing district shall be established to fund the provision and maintenance of sewers, streets, and other public improvements and services.

- **LU-22.6** Upon an annexation proposal, a change in general plan land use designations, which may include the Open Space designation if not set aside for flood control, habitat conservation, or master planned use, would be fully analyzed for appropriate alternate land use designations, which are required to mitigate all identified environmental and infrastructure impacts associated with the proposed land use change.

- **LU-22.7** Promote the use of specific plans within hillside areas of the SOI to address unique topographic and natural resource constraints and allow flexibility to develop a plan to ensure visual, infrastructure, and land use compatibility with the surrounding area.

*General Land Uses*

- **LU-22.8** Require that existing and future land uses in the proposed annexation area complement adjoining City uses and character.

- **LU-22.9** Encourage the County of Riverside to promote development of the SOI in accordance with the SOI land use plan and applicable density standards and design and development policies for such designations that have been previously defined by this element. Should these lands be annexed to the City, they shall be subject to this plan's policies.

- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

- **LU-22.11** Actively work with local, county, and regional governmental agencies to review proposed development proposals in the City and SOI that affect the land use patterns in areas surrounding or within the sphere areas.

*Coronita and Foothills*

- **LU-22.12** Maintain the existing mix of developed residential, commercial, open space, and related uses in Coronita.

- **LU-22.13** Promote and, should the area be annexed to the City, require the development of the Coronita foothills for low-density, rural housing that maintains the area's natural topography, drainage courses, and native landscapes. Housing should be clustered in lot patterns that complement development on adjoining lands in the City.

- **LU-22.14** Require that all proposed development in the very high fire severity zones provide appropriate protection against wildfires in accordance with state law, the California Building and Fire Codes, and regulations promulgated by the Board of Forestry and Fire Protection and CAL-FIRE.

### *Home Gardens*

- **LU-22.15** Promote the enhanced economic vitality of the Magnolia Avenue corridor in Home Gardens for a mix of general commercial and multi-family residential development consistent with the Temescal Canyon Area Plan.

### *Eagle Valley East*

- **LU-22.16** Promote, and should the area be annexed to the City require, the development of the Eagle Valley East area for housing that is designed in a manner that maintains the area's natural topography, drainage courses, and native landscapes. Development projects are required to meet all federal, state, and local regulations that are designed to protect against wildfire.

### *El Cerrito*

- **LU-22.17** Promote, and should the area be annexed to the City require, the development of the El Cerrito community for a variety of housing types, supporting local- and highway-serving commercial, and continued mining uses, as specified by the adopted specific plan and Temescal Canyon Area Plan to the extent applicable.

### *Temescal Valley*

- **LU-22.18** Promote, and should the area be annexed to the City require, the development of Temescal Valley for planned residential communities that integrate a variety of housing types, schools, parks, and other amenities; business and industrial parks supporting local- and highway-serving commercial; recreation resorts; and continued mining uses.

- **LU-22.19** Require the preparation of specific plans for mixed-use development projects and encourage their preparation for other, larger-scale residential subdivisions and business parks; provide comment to the County on proposed specific plans.

- **LU-22.20** Promote, and should the area be annexed to the City require, the development of residential communities designed to maintain the area's natural topography, drainage courses, and native landscapes. Housing should be clustered in patterns that complement development on adjoining properties. Development projects must meet all federal, state, and local regulations that protect against wildfire.

## Community Design Element

### *Street Landscaping*

- **CD-1.1** Require the planting and maintenance of street trees as part of development applications with consideration for the following principles:

- Physical constraints of the public street right-of-way, maintenance needs, and safety.
- Importance of shade, beauty, and variety of species that encourage pedestrian activity.
- Reflects the context of the surrounding residential, commercial, office, or industrial land uses.

- **CD-1.2** Maintain a street tree maintenance and enhancement program that visually distinguishes neighborhoods, districts, and corridors. Areas requiring specific treatment include, but are not limited to, Downtown along Grand Boulevard, Sixth Street, North Main Street Corridor, and other key districts.

- **CD-1.3** Maintain a street landscape master plan that identifies species to be used along public streets throughout the City. A palette of trees and landscaping should be designed to allow for:
  - Differentiation within key districts in the City, including Downtown, Sixth Street, North Main, and other locations.
  - Differentiation at the street's key nodal intersections, entryways, and public places.
  - Sustainable landscaping practices including but not limited to drought-resistant species.

- **CD-1.4** Protect landscaping and mature trees that are symbolic of the City's agricultural heritage, history, or identity for a district, neighborhood, or street corridor.

- **CD-1.5** Require developers of residential subdivisions to submit a landscape plan that defines a program of trees and plantings that uniquely identify streets, principal entries and intersections, and activity centers such as parks and community facilities.

- **CD-1.6** Seek to expand the citywide and district-specific district financing mechanisms to fully fund the cost of adding to, maintaining, and improving the City's public landscaping and street trees.

### *City Entries and Monumentation*

- **CD-2.1** Implement improvements at key entries into Corona from the SR-91 and I-15 corridors that provide a distinct sense of arrival and identity. These may include well-designed signage, landscape, lighting, public art, monuments, fountains, structures, and other elements that serve as visual landmarks. Common elements (graphics, signage, etc.) should be used to visually distinguish the location as a primary City entry.

  Potential locations include the SR-91 interchanges at McKinley Street, Main Street, Grand Boulevard, Lincoln Avenue, Sixth Street, Serfas Club Drive-Auto Center Drive, and Green River Road, and the I-15 interchanges at Magnolia Avenue, Ontario Avenue, and Cajalco Road.

- **CD-2.2** Coordinate the design of entry improvements with adjoining commercial and industrial property owners, where appropriate. Encourage the owners to incorporate landscape, signage, and architectural design elements in their projects that contribute to and complement the sense of entry from the freeways.

- **CD-2.3** Continue to promote the establishment of entry monumentation to identify and convey a distinct sense of arrival to designated communities, districts, and neighborhoods in Corona.

### *Community Signage and Wayfinding*

- **CD-3.1** Continue to promote the city's comprehensive public signage program for public wayfinding and places that identifies:
  - City entries
  - Street names
  - Public facilities such as the city hall and library
  - Parks, trails, and other recreational amenities
  - Key districts such as the Downtown and North Main Street
  - Historic districts, buildings, sites, and landscapes
  - Public transit stations and stops
  - Directional (wayfinding) information
  - Traffic control and parking (as regulated by state codes)
- **CD-3.2** Establish design specifications for each type of public sign with consideration for the following components:
  - Size, color, fonts, and shape
  - Logo (City seal or other simplified graphic design that can be used for other public purposes)
  - Placement (height above ground, position on utility pole, wall, or other fixture, and so on)
  - Illumination (if appropriate)
  - Text and data to be communicated
  - Consolidation of information onto a single sign, as permitted by state codes
- **CD-3.3** Work with private developers and property owners to develop on-site project signage for identification, traffic direction and wayfinding, and parking that complements the City's design program, where appropriate.
- **CD-3.4** Require that signage on private buildings be designed to exhibit a high quality of interest and visual appeal; be integrated into and reflect the building's architectural design character; and be sized to not overwhelm its scale and mass.

- **CD-3.5** Collaborate with the Corona Historical Society or other non-profit organizations to maintain and expand the Historic Markers program that identifies historical properties and/or historic landscapes in the City.

### *Trails and Greenways*

- **CD-4.1** Develop a plan and implement improvements that visually and physically interconnect the City's parklands and link these and residential neighborhoods with the Cleveland National Forest, and other open spaces. This may be accomplished by the installation of a continuous corridor of trees, plantings, informational signage, trails, and/or other defining elements along streets that connect the parks and open spaces or new corridors, where feasible.

- **CD-4.2** New development adjoining open spaces, washes or have the ability to provide pedestrian connections to off-site trails or pathways should be designed to ensure landscape transitions and compatibility with these resources. Such improvements should be designed to provide adequate flood protection for adjoining properties.

### *District, Nodes, and Corridors*

#### *Downtown Corona*

- **CD-5.1** Implement the streetscape improvements described in the Downtown Revitalization Specific Plan that are intended to uniquely identify Downtown Corona and enhance the pedestrian experience.

- **CD-5.2** Maintain and expand a program of Historic Markers that identify important historical buildings, properties, and landscape in the Downtown.

- **CD-5.3** Require renovations of buildings and new construction exhibit a high level of architectural character and foster pedestrian activity by adhering to design guidelines of the Downtown Revitalization Specific Plan.

#### *Corridor Enhancement*

- **CD-5.4** Maintain and expand, where appropriate, streetscape improvements that uniquely identify and contribute to the character of the North Main Street, complementing the trees, landscape, signage, lighting, and other elements that have been implemented.

- **CD-5.5** Require that the renovation of existing buildings and new construction along North Main Street Corridor exhibit a high level of architectural character by adherence to the design guidelines of the N. Main Street Specific Plan.

- **CD-5.6** Implement streetscape improvements for Sixth Street that enhance its identity and character. This should differentiate the street into its functional sub-areas. Improvements that should be considered include:

- Common street trees with accent trees at key nodes and intersections. Areas developed with housing and mixed-uses should have shade trees for pedestrians.
- Signage, landscape, lighting, or other elements at the entry portals from the freeways.
- Uniform and well-designed signage to identify key activity locations, wayfinding, traffic control, and parking. A logo should be incorporated to uniquely identify corridors and districts.
- Uniform and well-designed street furniture, clustered at transit stops and activity centers.

- **CD-5.7** Identify other key corridors (e.g., Magnolia Avenue, Ontario Avenue, etc.) that connect major activity centers and consider the inclusion of public landscaping, specialty pavement, signage, lighting, and other corridor enhancement projects that signal arrival into major districts.

***Freeway-Oriented and Community-Oriented Commercial Centers***

- **CD-5.8** Require commercial and office centers to enhance their aesthetic quality, image, and "fit" with adjoining land uses. Elements may encompass site and entry identification by signage, landscape, or lighting; extensive on-site landscape; public art; improvements of abutting public streetscapes; and other amenities.

- **CD-5.9** Require that the renovation of existing buildings and new construction within freeway-oriented and community-oriented commercial centers exhibit a high and distinctive level of architectural character and site design character by adherence to policies in the land use and community design elements and established design guidelines.

***Industrial and Business Parks***

- **CD-5.10** Require industrial projects to enhance their aesthetic quality, image, and "fit" with adjoining land uses. Elements may encompass site and entry identification by signage, landscape, or lighting; extensive on-site landscape; public art; improvements of abutting public streetscapes; and other amenities.

- **CD-5.11** Require that the renovation of existing buildings and new construction within industrial and business parks exhibit a high level of architectural and site design character by adherence to policies in the land use and community design elements and established design guidelines.

### *Visual Resources*

- **CD-6.1** Ensure unobstructed view corridors or viewsheds of the San Bernardino, Santa Ana, and San Gabriel Mountains, the Chino and La Sierra Hills, and other significant natural features from public spaces such as parks, termination of streets and community trails, community centers, and school properties, where feasible, as part of the design of development projects.

- **CD-6.2** Require that project applicants identify and map all slopes greater than 15 percent on parcels within the City's hillside areas, referred to as the "Hillside Management District," in increments of 5 percent. Lands within this District shall be subject to administrative review to ensure that development is

located and designed to reflect its distinct environmental and topographic characteristics consistent with the policies of this plan, under the provisions of a Hillside Development Ordinance.

- **CD-6.3** Require that development in hillside areas with greater than 25 percent slope be clustered on the most gently sloping portions of the site, to the extent feasible, according to the following density limitations of the underlying land use plan designations.

| Maximum Percentage of Site to Be Graded | Maximum Percent of Allowable Density |
|---|---|
| 40–44.9% | 100% |
| 45–49.9% | 90% |
| 50–54.9% | 80% |
| 55–59.9% | 70% |
| 60–64.9% | 60% |
| 65–69.9% | 50% |
| 70–74.9% | 40% |
| 75–79.9% | 30% |
| 80–84.9% | 20% |
| 85+% | 10% |

- **CD-6.4** Require that projects be designed and sited to maintain the natural topographic, physiographic, and aesthetic viewshed characteristics of those features, utilizing the following conditions:

  - Minimize the area and height of cuts and fills to the extent technically achievable, ensuring that slope tops and bottoms are rounded and facilitate a smooth and seamless transition where natural and built slopes intersect.

  - Configure development sites to mimic predevelopment natural topography by clustering sites and individual units and avoiding extensive fragmentation of steep slopes, "stair stepping" and varying terraces of structures, and/or other design practices.

  - Minimize the size of flat development pads in site grading to that necessary to accommodate the building footprint, a reasonable amount of useable outdoor space, and structural and site stability.

  - Encourage building architectural design styles, forms and shapes, materials, and building siting to complement rather than visually dominate their landscape setting.

  - Minimize the height of retaining walls, and design with smooth flowing forms that follow topography and with material colors and textures that blend in with the surrounding landscape.

  - Plant hillside and canyon slopes with natural species of drought-tolerant plants to soften the visual impact of land grading, retaining walls, structures, and roads and maintain (to the extent feasible) natural vegetation.

- Restore disrupted vegetation, wildlife habitat, natural water courses, drainage swales, and other important viewshed features. Vegetation should be arranged in informal masses to create a textured slope characteristic of natural chaparral mountain slope terrain.

- **CD-7.1** Review, update, and expand the City's Scenic Highway Plan to keep visual resources associated with the City's highways and roadways current; consider designation roads along the City's hillsides bordering the City as potential candidates for scenic roads or highways.

- **CD-7.2** Regulate new development, substantial rehabilitation, or renovation projects through provisions that require an analysis of impacts of development on the quality of the City's designated highways and corridors.

- **CD-7.3** Minimize to the extent feasible the installation or expansion of poles, billboards, and other above-ground appurtenances from detracting from the views along the City's scenic highways and corridors; phase out uses that impair scenic views.

## 5.1.4 Environmental Impacts

### 5.1.4.1 METHODOLOGY

The evaluation of aesthetics and aesthetic impacts is highly subjective, yet it must objectively identify the visual features of the existing environment and their importance. The characterization of aesthetics involves establishing existing visual character, including resources and scenic vistas unique to the project area. Visual resources are determined by identifying existing landforms (e.g., topography and grading), views (e.g., scenic resources such as natural features or urban characteristics), viewing points/locations, and existing light and glare (e.g., nighttime illumination). Changes to the existing aesthetic environment that would result from implementation of the General Plan Update are identified and qualitatively evaluated based on the proposed modifications to the existing setting and the viewer's sensitivity. It should be noted, however, that there are no locally designated or defined standards or methodologies for the assessment of aesthetic impacts.

### 5.1.4.2 IMPACT ASSESSMENT

The applicable thresholds are identified in brackets after the impact statement.

| | |
|---|---|
| Impact 5.1-1: | Development in accordance with the General Plan Update would not substantially alter or damage scenic vistas or resources or degrade views along a state scenic highway. [Thresholds AE-1 and AE-2] |

#### General Plan

Visual resources in the City and SOI include scenic mountain views, scenic city views, prominent scenic vistas, and scenic corridors.

- **Scenic Mountain Views**. Corona features scenic mountain views of Chino Hills State Park and Prado Basin to the northwest, San Bernardino Mountains to the north, Cleveland National Forest to the west,

Santa Ana Mountains to the south, and Gavilan Hills to the east. The Santa Ana and San Bernardino Mountains and Chino Hills are visible from all parts of the city and dominate most viewsheds from within the city except views to the north, which provide sweeping views of the heavily vegetated Prado Basin. The mountains frame the views of the city from the major entry points along SR-91 to the east and west, and I-15 from the north and south. The rural environment and open space areas in the far southern and eastern portions of Corona afford its residents clear views of scenic and natural resources.

- **Scenic City Views**. Roads that traverse Corona provide scenic views of the city, its hillsides, and environs. SR-91 meanders through the Santa Ana Canyon and provides view of the Cleveland National Forest and Chino Hills. I-15 extends south through Temescal Canyon between the Cleveland National Forest and Gavilan Plateau, providing panoramic views of the valley floor and surrounding hills. Cajalco Road, which extends eastward from Temescal Canyon to Mead Valley over the Gavilan Plateau, is also eligible for designation as a county scenic corridor. The views of the valley floor and backdrop of mountains from this corridor are breathtaking and worth preserving. Another significant view of Corona is provided from I-15 as it descends from the Norco Hills north of the city and provides a grand entrance into Corona. The breadth of the city is visible to motorists, and this view is particularly beautiful at night with the city lights as a backdrop and on clear days when views are unimpeded. Significant views of the city can be found from many ridges and peaks surrounding the city as well as within the canyons of the surrounding mountain ranges. Wide-open vistas associated with these natural features dominate the visual image of the city.

- **Prominent Scenic Vistas**. Significant vistas in the city include: (1) the Prado Basin views from Sierra del Oro, which encompass the basin on the south and canyon areas on the west; (2) the view south to the Santa Ana Mountains from the I-15/SR-91 freeway interchange; (3) the southern view of the San Bernardino foothills from major north-south streets south of Ontario Avenue; and (4) the views of the San Gabriel Mountains from the higher elevations south of Ontario Avenue. Eagle Glen in eastern Corona provides views of scenic vistas in the city along Eagle Glen and Palisades Drive/Green River Road south of the SR-71/SR-91 interchange. This corridor passes through a narrow canyon slot. Views from South Corona, including Ontario Avenue and Foothill Boulevard that traverse the higher slope areas, provide views looking north. This includes the Prado Basin on the west and the hills and valleys leading to the San Bernardino Mountains in the north and east. Residents who live on the wildland-urban interface often have direct canyon and mountain views from their residences. Residents who live north of the airport and to the east of Prado Basin in northwest Corona have views into the basin and further south to the mountains behind the city. The Prado Basin is also densely covered by trees and is best seen from Sierra del Oro, from Highway 71 near its intersection with SR-91, and from the industrial and residential areas flanking the basin in the northwest quadrant of the city.

- **Scenic Corridors.** As shown in Figure 5.1-1, there are no officially designated state scenic highways in the city. However, SR-72, I-15, and the portion of SR-91 west of the SR-91/I-15 interchange are designated eligible to be state scenic highways, according to the California Scenic Highway Mapping System (Caltrans 2011). The General Plan Update identifies six locally designated scenic highways in the city as well as the three state-eligible scenic highways as "scenic corridors" in the City and SOI (see Figure 5.1-1 and Table 5.1-1). Land uses near I-15 and SR-91 and the scenic corridors listed in Table 5.1-1 predominantly include

industrial, commercial, single-family residential, multifamily residential, vacant land, office, educational facilities, public open space/parks, and religious facilities. Views from these scenic corridors, as noted in Table 5.1-1, include the city's historic core, estates, and associated landscaping and mature trees; the Santa Ana Mountains; the low foothills of the San Bernardino Mountains; the Chino Hills and the preserved hillsides on the western edge of Chino Hills State Park; the Santa Ana Canyon; Temescal Valley; and the Gavilan Plateau.

The proposed land use plan would allow for development of currently undeveloped parcels and intensification of existing land uses, including along the local scenic corridors. However, as shown on Figure 3-4, *Existing Land Uses*, and Figure 3-5, *Land Use Plan, City of Corona*, and Figure 3-6, *Land Use Plan, Sphere of Influence Areas*, land use designations would remain the same. The General Plan would continue to preserve open space areas, parks, and agricultural lands that provide views of scenic vistas. The generally low-density residential uses, estate, and rural residential uses adjacent to these scenic vistas and resources would remain unchanged, thereby preserving views of these scenic vistas and resources. Therefore, vistas and scenic resources in and surrounding the city would not be adversely impacted.

In addition, future projects in the Hillside District are required to develop and implement land use controls that preserve significant visual resources from potential loss or disruption, such as encouraging development design that reflects the land's distinct environmental and topographical features, per the City's municipal code (Chapter 17.59, Hillside District). The Residential and Industrial Development Design Guidelines and the design guidelines adopted in specific plans encourage the highest level of design quality and support Corona's goals and objectives for promoting high-quality development. Therefore, development in accordance with the General Plan Update would not significantly alter or adversely damage the City's scenic vistas or resources.

The General Plan Update also includes goals and policies related to the preservation of scenic vistas and resources in the city. These include:

- **Goal CD-6.** Develop and implement land use controls that preserve significant visual resources from potential loss or disruption. (Policies CD-6.1 through CD-6.4)
- **Goal CD-7.** Maintain, establish, develop, and protect the City's highways and corridors for scenic purposes. (Policies CD-7.1 through CD-7.3)

The existing and proposed scale and design of the city, as well as its existing and future land uses, complement and do not detract from the backdrop scenery of the surrounding mountains, hillsides, and rural environment. The height of the surrounding mountains ensures that they will remain a scenic backdrop to Corona and the surrounding communities without interference from future development accommodated by the General Plan Update. And the design standards under the City's municipal code guide future development characteristics, such as height and placement of buildings and structures, setback requirements, and architectural design parameters.

Adherence to development and design standards and implementation of the General Plan Update policies would ensure that future development would not have a substantial adverse impact on scenic vistas or resources in the project area or along a state scenic highway.

### Climate Action Plan

The update to the City's Climate Action Plan (CAP) focuses on greenhouse gas (GHG) reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or intensity allowed by the proposed land use plan and would not detract from the visual quality of Corona. Consequently, implementation of the City's CAP would result in less than significant impacts to scenic vistas and scenic resources within a state scenic highway.

**Impact 5.1-2: Buildout in accordance with the proposed land use plan would alter the existing visual appearance of the City and SOI, but would not substantially degrade its existing visual character or quality. [Threshold AE-3]**

### General Plan

Future development in accordance with the General Plan Update would allow for new development of currently undeveloped parcels and intensification of already developed areas in the city. Although new development would alter the visual appearance of the city, it would not degrade Corona's visual character or quality. Buildout under the General Plan Update would occur in areas already developed and urbanized, or areas that are designated for development. Areas designated as open space, parks, and agricultural lands would remain undeveloped under the implementation of the General Plan Update. However, the General Plan Update does not preclude agricultural lands from being amended in the future by a separate General Plan Amendment to accommodate development.

The City of Corona is characterized by its diversity of residential neighborhoods, which include historic neighborhoods, older neighborhoods, and new neighborhoods. Historic neighborhoods are characterized by single-family and small-scale multifamily dwellings; the older neighborhoods are characterized by their diverse architectural design and quality. Additionally, master planned residential neighborhoods extend outward from the Downtown into the foothill slopes; newer neighborhoods are characterized by their smaller lot sizes for single-family detached units which allow for a higher intensity of green space and amenity. As shown in Figure 3-5, a majority of the city's residential uses are low density and either south of 6th Street or in the northeast part of the city. Rural residential and estate residential uses are along the southwestern and northwestern boundaries of the city. Commercial and office uses are concentrated along 6th Street, Ontario Avenue, the eastern portion of SR-91 and southern portion of I-15. Industrial uses are situated along the eastern boundary of the city and in the northern portion of the city along SR-91. The city's wildland-urban interface is along the eastern, western, and southwestern boundaries.

The Community Design Element includes policy directives to ensure that continued investments in the city will enhance vitality, context, form, and function. Through these policies, Corona supports communities and districts in the city and seeks to establish and retain their unique sense of place. The General Plan Update also calls for preserving the historic character of recognized heritage properties, the rural character of Corona's foothills, the "village-like" character of Downtown, and the natural topography of the City and SOI. Therefore, implementation of the General Plan Update would not introduce a substantial amount of new development

or intensify development to the point that it would damage or alter the existing visual character or quality of the city.

The goals and policies in the Community Design Element are implemented through more detailed residential and nonresidential design guidelines and specifications—architectural standards, landscape palettes, and streetscape improvement plans that provide guidance for the preferred design of buildings, landscaping, streetscapes, and public spaces. For example, development under the General Plan Update would be required to comply with existing regulations that assist in maintaining the City's character, including the City's residential and industrial development design guidelines, which encourage the highest level of design quality and support Corona's goals and objectives, and the residential and commercial, and industrial landscape design guidelines, which provide for well-designed and attractive development intended to promote a sense of community. Title 17 of the Corona Municipal Code is the city's Zoning Ordinance and governs the development and use of property through the implementation of development standards that are intended to preserve visual resources and maintain the aesthetic appearance of residential neighborhoods and non-residential properties and corridors. The City's Zoning Ordinance would ensure that development under the General Plan Update would continue to maintain and be compatible with the city's visual character.

The General Plan Update Land Use Element policies also ensure that the City's visual character is preserved—e.g., LU-1.5, LU-2.4, LU-2.8, LU-5.1 through LU-5.13, LU-7.9, LU-7.10, LU-9.2, LU-9.7 through, LU-9.9, LU-11.8 through LU-11.12, LU-12.6, LU-13.6, LU-14.1, and LU-17.20 through LU-17.22. The overarching goals of these policies include compatibility, cohesion, and integration of development; distinct and well-maintained neighborhoods contributing to character and identity; diverse housing that enhances livability; and high quality architecture.

By complying with the City's existing regulations and the General Plan Update policies, future developments would be built to reflect and maintain Corona's existing visual character and resources. Impacts would be less than significant.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or intensity allowed by the proposed land use plan and would not substantially affect the visual character of the city. Improvements implemented as part of the CAP would be subject to residential and nonresidential design guidelines and specifications. Consequently, implementation of the CAP would result in less than significant impacts to aesthetics.

| | |
|---|---|
| Impact 5.1-3: | Future development in accordance with the General Plan Update would generate additional light and glare in the City and SOI that would impact surrounding existing land uses; however, light and glare would be minimized through adherence to the City's lighting standards. [Threshold AE-4] |

## General Plan

Sources of light and glare in the City include building lighting (interior and exterior), security lighting, sign illumination, ballfield lighting and parking-area lighting. These sources are mostly associated with the residential, commercial, and industrial uses and the larger community parks in the more developed areas of the city. Other sources of nighttime light and glare include streetlights, vehicular traffic along surrounding roadways, and ambient lighting from surrounding communities.

Future development in accordance with the General Plan Update would occur in areas designated for development and would allow for development of currently undeveloped parcels and alterations, intensification, and redistribution of existing land uses, which could increase nighttime light and glare in the city. For example, conversion of underutilized or vacant areas into residential or commercial uses would introduce new sources of light (building illumination, security lighting, streetlights, etc.). However, land uses throughout the City and SOI would maintain their existing land use designations. This includes the areas along the western boundary, which would maintain their existing land use designations of estate residential, rural residential, low density residential, and open space general, thereby ensuring that light and glare are minimized in areas adjacent to Cleveland National Forest.

Sources of light and glare from new developments, residents, and employees would include lighting needed to provide nighttime street and building illumination, security lighting, traffic sign illumination, lighting in parking areas, and lighting associated with construction activities. This would likely introduce new significant sources of light and glare. However, development and redevelopment projects in the city would be required to comply with the residential and commercial and industrial landscape design guidelines, which consider accent lighting and lighting in the City's landscape assessment districts. Chapter 17.76 of the municipal code ensures that lighting in parking areas is designed and arranged to minimize the effects of spill light, and Chapter 17.86 indicates that all exterior lighting be directed downward to minimize spillover onto adjacent properties, sensitive land uses, and open space areas.

In addition, the General Plan Update includes the following policies to minimize light and glare:

- **Policy LU 11.12** Require that commercial projects abutting residential neighborhoods be designed and buildings be located to prevent conflicts and ensure an appropriate interface with adjoining housing in consideration of the following principles:
  - Reduction of building heights and modulation of mass and volume of the building in proximity to the adjacent housing.
  - Inclusion of landscape and attractively designed walls as buffers to mitigate noise, provide privacy, and serve as a visual amenity between the commercial and residential uses.

- Design of building elevations facing residential properties to ensure privacy of adjoining housing.
- Control of the location of commercial truck access, loading, parking, and comparable functions in proximity to adjoining housing or other sensitive land uses.
- Design of on-site and building lighting to prevent spillover, glare, and adverse illumination of adjoining residential properties.

- **HC-2.4** Ensure that individuals, neighborhoods, and businesses clearly understand the potential for adverse pollution, noise, odor, vibration, and lighting and glare, and the effects of toxic materials or emissions when generating uses are proposed near them.
- **HC-2.6** Apply and enforce performance standards with respect to fire and explosion hazards, radio frequency or electrical disturbance, noise and vibration, dust, smoke, glare, underground storage tanks, or other potential sources of exposure to pollution.

By ensuring that all future development projects comply with the City's municipal code sections and General Plan Update policies pertaining to light and glare, any potential spillover would be minimized, and impacts would be less than significant.

### Climate Action Plan

The update to the CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the city. The CAP would not affect the building density or intensity allowed by the proposed land use plan. However, the CAP would encourage solar panel installations, which have the potential to create sources of light and glare in the city. The City would review individual applications for new solar installations to ensure that they would not cause glare impacts. Consequently, implementation of the City's CAP would result in less than significant impacts to aesthetics.

## 5.1.5 Existing Regulations and Standard Conditions

### Local

- City of Corona Municipal Code
- City of Corona Design Guidelines

## 5.1.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, Impacts 5.1-1, 5.1-2, and 5.1-3 would be less than significant.

## 5.1.7 Mitigation Measures

No significant adverse impacts were identified and no mitigation measures are necessary.

## 5.1.8 Level of Significance After Mitigation

No mitigation measures are required, and impacts would be less than significant.

## 5.1.9 References

California Department of Transportation (Caltrans). 2011, September 7. California Scenic Highway Mapping System. http://www.dot.ca.gov/hq/LandArch/scenic_highways/.

Corona, City of. 2004a, March 17. City of Corona General Plan. Resolution No. 2004-034. Prepared by EIP Associates.

Riverside County Transportation and Land Management Agency. 2015, December 8. Riverside County General Plan.

# 5. Environmental Analysis
## AESTHETICS

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# 5.2 AGRICULTURE AND FORESTRY RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Corona General Plan Update to impact agriculture and forestry resources in the City of Corona and its sphere of influence (SOI). Cumulative impacts related to agriculture and forestry resources would be contiguous with the City and SOI boundary, but also consider regional agricultural resources.

## 5.2.1 Environmental Setting

### 5.2.1.1 REGULATORY FRAMEWORK

#### State Laws

##### *California General Plan Law*

The California Government Code (§ 65302(d)) requires the general plan to include an open space and conservation element for the conservation, development, and utilization of natural resources—including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. The conservation element must consider the effect of development on natural resources that are on public lands. The element must also cover:

- The reclamation of land and waters.
- Prevention and control of the pollution of streams and other waters.
- Regulation of the use of land for the accomplishment of the conservation plan.
- Prevention, control, and correction of the erosion of soils, beaches, and shores.
- Protection of watersheds.
- Location, quantity, and quality of the rock, sand, and gravel resources.
- Waterways, flood corridors, riparian habitats, and land that may accommodate floodwater for groundwater recharge and stormwater management.

In October 2017, the state legislature passed SB 732, which authorizes a city to develop an agricultural land component of the open space element or a separate agricultural element in its general plan. For local governments that choose this option, the bill authorizes the Department of Conservation to award grants, bond proceeds, and other assistance provided the element meets certain requirements.

##### *Farmland Mapping and Monitoring Program*

The California Natural Resources Agency is charged with restoring, protecting, and maintaining the State's natural, cultural, and historical resources. Within it, the State Department of Conservation (DOC) provides technical services and information to promote informed land use decisions and sound management of the

State's natural resources. DOC manages the Farmland Mapping and Monitoring Program (FMMP), which supports agriculture throughout California by developing maps and statistical data for analyzing land use impacts to farmland. Every two years, FMMP publishes a field report for each county in the state. The most recent field report for San Joaquin County was published in 2014. The field report categorizes land by agricultural production potential, according to the following classifications:

- **Prime Farmland** has the best combination of physical and chemical features able to sustain long-term agricultural production. Prime Farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agriculture production at some time during the four years prior to the mapping date.

- **Farmland of Statewide Importance** is similar to Prime Farmland, but with minor shortcomings, such as steeper slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- **Unique Farmland** consists of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been farmed at some time during the four years prior to the mapping date.

- **Farmland of Local Importance** includes all farmable land within San Joaquin County not meeting the definitions of "prime farmland," "farmland of statewide importance," and "unique farmland." This includes land that is or has been used for irrigated pasture, dryland farming, confined livestock or dairy facilities, aquaculture, poultry facilities, and dry grazing. It also includes lands previously designated by soil characteristics as "prime farmland," "farmland of statewide importance," and "unique farmland" that has since become idle.

- **Grazing Land** is the land on which the existing vegetation is suited to the grazing of livestock.

- **Confined Animal Agriculture** lands include poultry facilities, feedlots, dairy facilities, and fish farms. In some counties, confined animal agriculture is a component of the farmland of local importance category.

- **Nonagricultural and Natural Vegetation** includes heavily wooded, rocky, or barren areas riparian and wetland areas; grassland areas that do not qualify for grazing land due to their size or land management restrictions; small water bodies; and recreational water ski lakes. Constructed wetlands are also included in this category.

- **Semi-Agricultural and Rural Commercial Land** includes farmstead, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds.

- **Vacant or Disturbed Land** includes open field areas that do not qualify for an agricultural category, mineral and oil extraction areas, off road vehicle areas, electrical substations, channelized canals, and rural freeway interchanges.

- **Rural Residential Land** includes residential areas of one to five structures per 10 acres.
- **Urban and Built-Up Land** is occupied by structures with a building density of at least one unit per 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential structures, industrial structures, commercial structures, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment structures, and water control structures.
- **Water** is used to describe perennial water bodies with an extent of at least 40 acres.

### *California Land Conservation Act (Williamson Act)*

The California Land Conservation Act of 1965, better known as the Williamson Act, conserves agricultural and open space lands through property tax incentives and voluntary restrictive land use contracts administered by local governments under State regulations. Private landowners voluntarily restrict their land to agricultural and compatible open space uses under minimum ten-year rolling term contracts, with counties and cities also acting voluntarily. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value.

Nonrenewal status is applied to Williamson Act contracts that are within the nine-year termination process, during which the annual tax assessment for the property gradually increases.

### *Forestland and Timberland Protection*

State regulations such as the Forest Taxation Reform Act of 1976 and the Z'berg-Nejedly Forest Practice Act of 1973 (California Forest Practice Act) provide for the preservation of forest lands from encroachment by other, incompatible land uses and for oversight of the management of forest practices and forest resources.

#### *Public Resources Code Section 12220(g)*

Public Resources Code Section 12220(g) defines "forest land" for the purposes of CEQA. According to the Code, "forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water-quality, recreation, and other public benefits.

#### *Government Code Section 51104(g)*

The California Timberland Productivity Act of 1982, like the Land Conservation Act, was passed to encourage the production of timber resources. Government Code Section 51104(g) defines "Timber," "Timberland," and "Timberland Production Zone" for the purposes of CEQA and "Timberland Preserve Zone," which may be used in city and county General Plans.

- **"Timber"** means trees of any species maintained for eventual harvest for forest production purposes, whether planted or of natural growth, standing or down, on privately or publicly owned land, including Christmas trees, but does not mean nursery stock.

- **"Timberland"** means privately owned land, or land acquired for State forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre.

- **"Timberland Production Zone"** or **"TPZ"** means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, "Timberland Preserve Zone" means "Timberland Production Zone."

County boards of supervisors may designate areas of timberland preserve, referred to as Timberland Production Zones, which restrict the land's use to the production of timber for an initial 10-year term in return for lower property taxes

## Regional Laws

### *Riverside County General Plan*

The Riverside County General Plan contains policies to support agricultural uses. The Open Space Element includes policies to preserve prime farmland; encourage compatible agricultural uses; and work with agencies to reduce soil erosion, improve soil quality, and address pest management, encourage the conservation of forestlands and natural habitats in the Western Riverside County Multi-Species Habitat Conservation Plan and conserve the oak tree resources in the County. Land use element policies encourage viable agricultural uses through land use regulation, Williamson Act contracts, the County's right-to-farm ordinance, tax incentive programs, and other land use programs.

The Temescal Canyon Area Plan (TCAP) contains goals and policies to support efforts to conserve soils needed for plants and habitat. These include supporting the conservation of rocky soils coinciding with coastal sage scrub (TCAP 19.15), preservation of clay soils for sensitive plant species (TCAP 19.6), and conservation of sandy soils for chaparral (TCAP 19.7). The TCAP also has a land use designation for row crops, nurseries, dairies, poultry farms, processing plants, and other related uses. Limited agricultural uses are allowed in the many rural and open space designations. Although county policies address agricultural uses, the TCAP does not have separate policies that encourage or preserve existing agricultural land uses.

## Local Laws

### *Corona Municipal Code*

The Corona Municipal Code has an Agricultural zone defined by Chapter 17.06 and two overlay zones—Agricultural Products (AP) and Animal Keeping and Agricultural Operation (AA)— defined by Chapter 17.62 that allow for agricultural uses. The A zone was developed to accommodate the agricultural land uses that existed in Corona before urbanization. The AP overlay zones was originally developed during the early 1980s to allow the retail sale of agricultural products on land where the product is grown and has an Agricultural zone. The AA overlay zone was created in 2013 when the city attempted to annex Temescal Valley.

- The **Agricultural Zone** is intended as a district for general agricultural purposes, with appropriate single-family residences and customary accessory buildings.
- The **AP Overlay Zone** allows for an interim use of land for the retail sales of plant goods, fruits, vegetables, and associated products that conform to the A zone that will provide improvements in conformance with the general health, safety, and general welfare of the city. This zoning designation will continue to allow for existing agricultural land uses.
- The **AA Overlay Zone** accommodates the rural-residential properties in Temescal Valley that were annexed to the City. The AA overlay zone allows for field crops, vegetable gardening, greenhouses, and tree crops; noncommercial keeping of certain animals associated with more rural agricultural land uses (cattle, sheep, horses, etc.); and other ancillary uses consistent with the overlay zone.

### 5.2.1.2 EXISTING CONDITIONS

## Agricultural Uses

### *Farmland*

Historically, agricultural preserves and uses covered a significant portion of Corona. Figure 5.2-1, *Agricultural Resources*, depicts the location of agricultural resources in Corona and its SOI according to the state of California's farmland mapping program. The vast majority of productive farmland is in southwest Corona, and the majority of grazing land is east of the I-15 in the City's SOI. Due to significant development over the past 50 years, Corona no longer has any agricultural preserves within its incorporated boundary. However, several preserves remain in the SOI, including a large agricultural preserve within Eagle Valley. Table 5.2-1, *Agricultural Resources in Corona*, summarize acreage of agricultural resources in Corona and SOI. However, not all the agricultural resources shown in Table 5.2-1 have an agricultural land use on the General Plan.

Table 5.2-1 Agricultural Resources in Corona

| Agricultural Lands | City of Corona Acreage | Sphere of Influence (SOI) Acres | Total |
|---|---|---|---|
| Prime Farmland | 98 | 18 | 116 |
| Farmland of Statewide | 24 | 49 | 73 |
| Unique Farmland Importance | 86 | 401 | 487 |
| Farmland of Local Importance | 1,214 | 861 | 2,075 |
| Grazing Land | 1,762 | 4,163 | 5,925 |
| Total | 3,183 | 5,491 | 8,674 |
| Agricultural Preserves | N/A | 331 | 331 |

Source: County of Riverside 2019.

### *City of Corona Agricultural Designations*

Corona Municipal Code Chapters 17.06, Agricultural Zone and 17.62, Overlay Zones, governs agricultural land uses in the city. As detailed above in Section 5.2.1.1, the A zone allows for certain types of agricultural uses, including the keeping of certain animals normally suited to agricultural uses; the AP overlay zone allows for an interim use of land for the retail sales of plant goods, fruits, vegetables, and associated products in the A zone; the AA overlay zone accommodates the rural-residential properties in Temescal Valley should this SOI be annexed to the City, and allows for field crops, vegetable gardening, greenhouses, and tree crops. Noncommercial keeping of certain animals associated with more rural agricultural land uses and other ancillary uses consistent with the overlay zone are also permitted.

## Forest Land and Timberland

Corona's western border is shared by the Cleveland National Forest, which is managed by the U.S. Forest Service. The Riverside County portions of the Cleveland National Forest only reach moderate elevations of 2,000 to 3,000 feet average mean seal level and generally do not support large expanses of mature conifers.

Corona's hillside and canyons contain a mix of riparian forest, southern sycamore alter riparian woodland, and southern coast live oak riparian forest, as shown in Figure 5.4-6, *Vegetation*, in Chapter 5.4, *Biological Resources*, of the DEIR. Montane coniferous forest resources are also in several locations of Corona, including the westernmost SOI and Sierra del Oro area, Eagle Valley, the western interface with the Cleveland National Forest, and portions of El Cerrito. The Prado Basin also contains areas with forestland, riparian scrub, woodland forest.

Isolated woodlands that could fall under the definition of forest land per California Public Resource Code Section 12220(g) are located in Temescal Canyon, the western boundary of the City (which shares its western boundary with Cleveland National Forest), and west of Coronita. Additionally, riparian scrub, woodland, and forest lands are predominantly found in El Cerrito, Temescal Canyon, and the northern portion of the City, east of the Prado Basin. These woodlands are shown in Section 5.4, *Biological Resources*, Figure 5.4-6, and are primarily located on water and flood control, vacant, open space, and natural open space lands. Scattered forest in the CAL FIRE data also shows greater concentrations of woodlands beyond the City and SOI, to the north and east.

## Other Agricultural Uses

Historically, agricultural preserves and uses covered a significant portion of the city and was the livelihood for many of the early settlers in Corona. Corona no longer has any agricultural preserves within its incorporated boundary. However, several large preserves remain that area adjacent to its eastern boundary, most notably in Eagle Valley. While large-scale agriculture no longer exists in Corona, urban agriculture has become a more popular practice, such as community gardens and backyard farming.

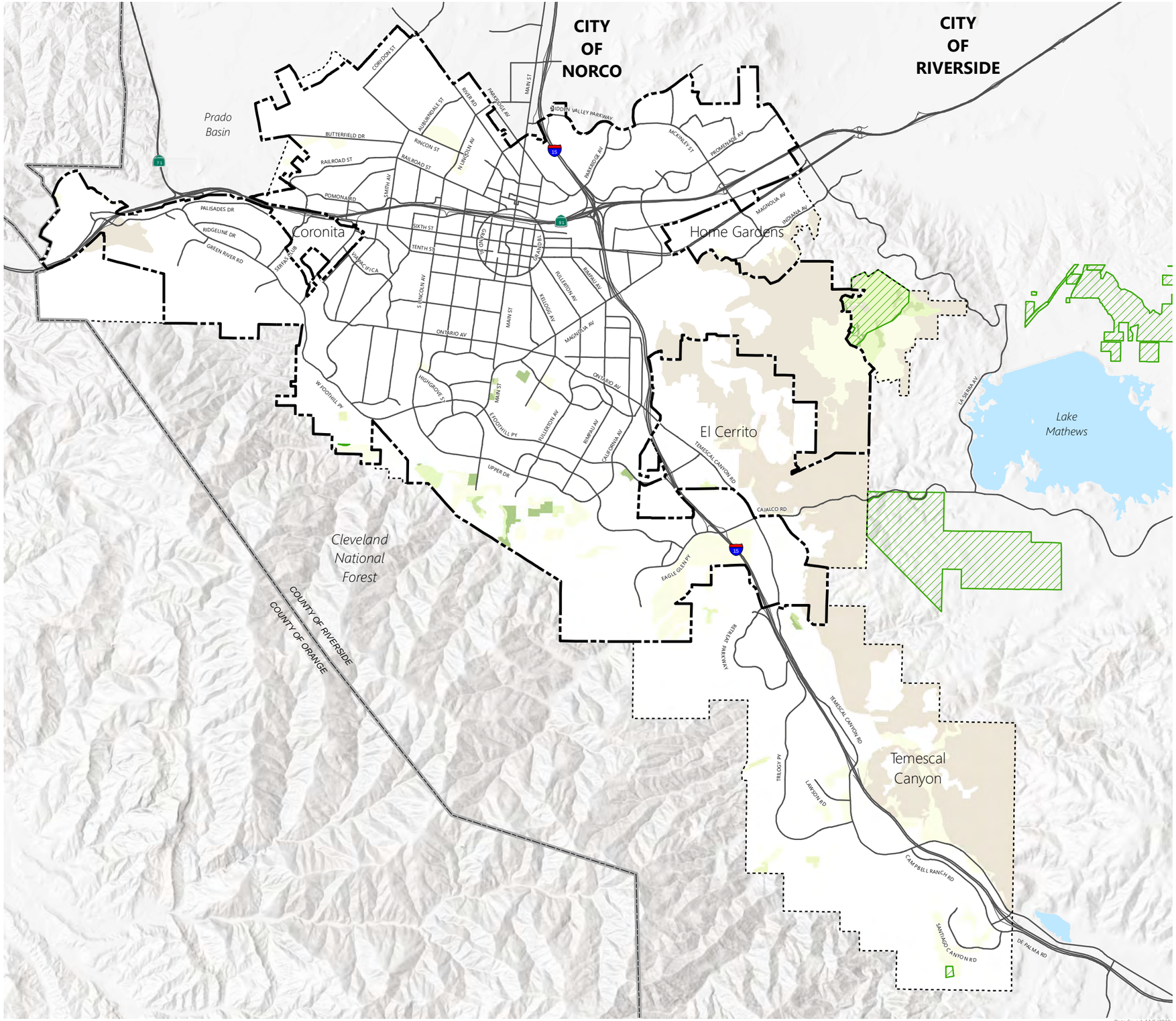


Figure 5.2-1

# AGRICULTURAL RESOURCES

## Legend

- City Boundary
- Sphere of Influence Areas
- Agricultural Preserves
- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Grazing Land
- Farmland of Local Importance

Notes:
On February 22, 2006 the Williamson Act contract was terminated on this APN No. 275-090-001-8 and 275-090-010-6

*Source:*
*Riverside County. 2019a, September 9 (updated). "Agricultural Preserves." Riverside County Mapping Portal. https://gisopendata-countyofriverside.opendata.arcgis.com/datasets/agricultural-preserves.*

*Riverside County. 2019b, September 9 (updated). "Farmland." Riverside County Mapping Portal. https://gisopendata-countyofriverside.opendata.arcgis.com/datasets/farmland.*

CORONA General Plan EIR

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PLACEWORKS

# 5. Environmental Analysis
## AGRICULTURE AND FORESTRY RESOURCES

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## 5.2.2 Thresholds of Significance

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

AG-1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use.

AG-2 Conflict with existing zoning for agricultural use, or a Williamson Act contract.

AG-3 Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).

AG-4 Result in the loss of forest land or conversion of forest land to non-forest use.

AG-5 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

## 5.2.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reducing potential impacts as a result of implementation of the proposed project.

### Healthy Communities Element

#### *Promoting Food Access*

- **HC-3.1** Allow for limited agricultural uses, including community gardens, in areas of the city that are consistent with land use, zoning, and permitting requirements.

### Environmental Resources Element

#### *Biological Resources*

- **ER-8.1 Cooperate with federal and state agencies to achieve the sustainable conservation of forest lands as a means of providing open space and protecting natural resources and MSHCP habitat.**

- **ER-8.2** Support conservation programs to reforest privately held forest lands.

- **ER-8.3** Work with Riverside County to update the Vegetation Map for Corona and the SOI areas in cooperation with the California Department of Fish and Wildlife, the Natural Diversity Data Base, the United States Forest Service, and other knowledgeable agencies.

- **ER-8.4** Maintain and conserve superior examples of native trees (including oak trees), natural vegetation, stands of established trees, and other features for aesthetic and water conservation purposes.
- **ER-8.5** Conserve the oak tree resources in the City to the extent feasible.

## 5.2.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.2-1: Development of the proposed project would convert 7,591 acres of Farmland in the City and SOI to nonagricultural use. [Threshold AG-1 and Threshold AG-5 (part)]**

### General Plan

CEQA requires analysis of conversion on three categories of Important Farmland: Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. The City and SOI contain Farmland that would be converted to nonagricultural use through buildout of the General Plan Update. All of these lands are either adjacent to or completely surrounded by urban development. As detailed in Table 5.2-2, *Farmland Impacts,* implementation of the General Plan Update would result in land currently used for agricultural uses to be converted to other land use designations.

A total of 29 acres, 60 acres, and 407 acres of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland, respectively, which is a total of 496 acres, approximately 73 percent, in the City and SOI, would be lost as a result of the implementation of the General Plan Update. Of the total 116 acres, 73 acres, and 487 acres of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland in the City and SOI, respectively, 87 acres, 13 acres, and 80 acres, approximately 26 percent, of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland would remain as agricultural uses in the City and SOI upon the implementation of the General Plan Update. As shown in Table 5.2-2, a total of approximately 7,591 acres, or 88 percent, of farmland in the City and SOI would be converted to non-agricultural uses.

Table 5.2-2 Farmland Impacts

| Agricultural Lands | City of Corona Impacted Acreage | Sphere of Influence (SOI) Impacted Acres | Total Impacted Acres |
|---|---|---|---|
| Prime Farmland | 11 | 18 | 29 |
| Farmland of Statewide | 11 | 49 | 60 |
| Unique Farmland Importance | 6 | 401 | 407 |
| Farmland of Local Importance | 638 | 843 | 1,481 |
| Grazing Land | 1,503 | 4,111 | 5,614 |
| Total | 2,169 | 5,422 | 7,591 |
| Agricultural Preserves | N/A | 8 | 8 |

Source: Farmland Mapping and Monitoring Program 2016

The current land use plan designates some of these areas as Estate Residential (ER), Agriculture (AG), Low Density Residential (LDR), Office Professional (OP), and Light Industrial (LI). However, agricultural uses would continue to be permitted on these land designations of the zoning permits agricultural uses. As the proposed project would not change the land use designations, density, or intensity levels beyond which is currently within the 2004 General Plan, all existing farmlands would remain for agricultural uses, and would not result in the conversion of zoning for Farmland to other non-agricultural development. However, development of the General Plan Update would convert farmland which have non-agricultural land use designations to non-agricultural use. The associated loss of agricultural production would be a significant impact.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction targets to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building intensity or density allowed by the proposed Land Use Plan. Consequently, implementation of the City's Climate Action Plan would not convert farmland to non-agricultural uses.

**Impact 5.2-2: Development of the proposed project in the SOI would convert Williamson Act contract land to non-agricultural use. [Threshold AG-2]**

### General Plan

Williamson Act establishes a mechanism for saving agricultural land by allowing counties to create agricultural preserves and then to enter into contracts with landowners within those preserves. A Williamson Act contract obligates the landowner to maintain the land as agricultural for 10 or more years, with resulting tax benefits. Absent contrary action, each year the contract renews for an additional year, so that the use restrictions are always in place for the next nine to 10 years. There are several methods to terminate a Williamson Act contract, including nonrenewal and cancellation. The procedures for cancelling a Williamson Act contract require that the cancellation be in the public interest.

On February 22, 2006, the Williamson Act contract for a preserve in the City was terminated, and there are currently no Williamson Act contracts in the City. Of the total 331 acres of agriculture preserves in the SOI (see Table 5.2-1), 8 acres, or approximately 2.4 percent, would be lost to development upon implementation of the General Plan Update (see Table 5.2-2) and 323 acres of agricultural preserves in the SOI would remain. Despite potential that Williamson Act contract land in the SOI would remain, the loss of 8-acres in the SOI would result in a significant impact to agriculture in the region.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction targets to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the

building intensity or density allowed by the proposed Land Use Plan. Consequently, implementation of the City's Climate Action Plan would not convert Williamson Act land to non-agricultural use.

**Impact 5.2-3: The proposed project would not rezone forestland or timberland, nor would the proposed project result in the loss or conversion of forestland to non-forest uses [Threshold AG-3, Threshold AG-4, and Threshold AG-5(part)]**

## General Plan

According to CALFIRE, there are no current or planned fixed commercial timber operations subject to a Timber Harvesting Plan in southwest Riverside County and there are no timber production zones in the City of Corona or its SOI. Consequently, implementation of the General Plan Update would not result in loss or conversion of timberland to non-forest uses.

As shown in Section 5.4, *Biological Resources*, Figure 5.4-6, portions of the City and SOI contain woodland and forest vegetation, predominantly in eastern and western peripheries of the project area—the central portion of the City, Temescal Canyon, and Home Gardens; the eastern and western portions of El Cerrito; and Coronita are listed as developed and disturbed land. Isolated woodlands that could fall under the definition of forest land per California Public Resource Code Section 12220(g) are located in Temescal Canyon, the western boundary of the City (which shares its western boundary with Cleveland National Forest), and west of Coronita. However, the Riverside County portions of the Cleveland National Forest only reach moderate elevations of 2,000 to 3,000 feet average mean seal level (amsl) and generally do not support large expanses of mature conifers. Consequently, implementation of the General Plan would not impact forestland that can support 10-percent native tree in the City and SOI in the urban-wildland interface.

Additionally, riparian scrub, woodland, and forest vegetation are predominantly found in El Cerrito, Temescal Canyon, and the northern portion of the City, east of the Prado Basin. These isolated woodlands are shown in Figure 5.4-6, and are primarily located on water and flood control, vacant, open space, and natural open space lands. Consequently, implementation of the General Plan Update would not impact potential forestland in these areas of the City or SOI

Furthermore, the General Plan includes the following policies to reduce impacts to forest resources:

- **ER-8.1** Cooperate with federal and state agencies to achieve the sustainable conservation of forest lands as a means of providing open space and protecting natural resources and MSHCP habitat.
- **ER-8.2** Support conservation programs to reforest privately held forest lands.
- **ER-8.3** Work with Riverside County to update the Vegetation Map for Corona and the SOI areas in cooperation with the California Department of Fish and Wildlife, the Natural Diversity Data Base, the United States Forest Service, and other knowledgeable agencies.

- **ER-8.4** Maintain and conserve superior examples of native trees (including oak trees), natural vegetation, stands of established trees, and other features for aesthetic and water conservation purposes.

- **ER-8.5** Conserve the oak tree resources in the City to the extent feasible.

Development in the City and SOI would not result in the loss or conversion of forestland to non-forest uses. Additionally, the proposed project would not change land use designations, densities, or intensities beyond which is currently within the 2004 General Plan; and therefore, the proposed project would not rezone forestland to non-forest use.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction targets to achieve the 2030 and 2040 reduction goals. The Climate Action Plan Update would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building intensity or density allowed by the proposed Land Use Plan. Additionally, the Climate Action Plan Update includes the following measure to reduce the urban heat island effect:

- **Measure 6.1:** Tree Planting for Shading and Energy Efficiency. Promote tree planting at plan check for private properties

Consequently, implementation of the City's Climate Action Plan Update would not rezone or result in a loss or conversion of agricultural or forestland to non-agricultural or non-forestland.

## 5.2.5 Existing Regulations and Standard Conditions

Farmland Mapping and Monitoring Program (California Government Code Section 65570)

## 5.2.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.2-3.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.2-1** Development of the proposed project would convert Farmland to non-agricultural use.

- **Impact 5.2-2** Development of the proposed project in the SOI would convert Williamson Act contract land to non-agricultural use.

## 5.2.7 Mitigation Measures

### Impact 5.2-1

In compliance with CEQA, "each public agency shall mitigate or avoid the significant effects on the environment of any project it carries out or approves whenever it is feasible to do so" (Public Resources Code, Section 21002.1[b]). The term "feasible" is defined in CEQA to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (Public Resources Code, Section 21061.1). The following measures were considered and rejected

- *Retention of On-Site Agricultural Uses*. Currently, there are approximately 7,591 acres of Farmland in the City and SOI that would be converted to non-agricultural uses. Further plans to conserve agricultural land within the City would be infeasible because they would not be consistent with the City's goals for housing and jobs and because it would place farmland near incompatible land uses. This would create islands of agricultural uses within an urbanized setting, potentially resulting in incompatible land uses. The City's policy towards the long-term maintenance of agriculture can also be seen from the land use designations proposed, none of which would solely allow agriculture permanently. Thus, there are policy-based reasons for finding onsite mitigation to be infeasible. Additionally, the economic viability of agricultural use in Riverside County has declined as a result of losing many of the support services associated with the agricultural industry. Ultimately, the long-term viability of agriculture within the City is limited due to the increasing land prices and values, higher water costs, higher labor costs, higher property taxes, competition from other parts of the state, and the growing urbanization of the area. These factors make the long-term, permanent use of lands within the City for agricultural purposes economically infeasible.

- *Establishment of Conservation Easement or Preserves or Payment into an Agricultural Mitigation Bank*. Since the majority of the City is being developed, the agriculture allowed in conservation easements or preserves would have to be limited to types of agriculture that do not impact neighboring communities and residents since agricultural use carries its own adverse environmental effects, such as the creation of dust, odors, pesticide use and machinery noise. In the last century agricultural land within Riverside County has diminished as development pressures in areas near urban centers, such as the City of Corona, have resulted in an increase in land value that makes continued agricultural use cost prohibitive. Moreover, agricultural conservation easements would not actually affect the amount of farmland permanently lost. Likewise, payment of fees into a mitigation bank would not actually avoid or reduce the conversion of farmland resulting from development under the proposed General Plan. For these reasons, the establishment of conservation easements or preserves is not deemed to be feasible or effective mitigation.

- *Payment in Lieu or Transfer of Development Rights*. Transferring development rights would involve the purchasing of the right to develop land from a currently undeveloped piece of land and transferring those rights to farmland within the City. Thus, this option is also infeasible because there would still be a net loss of Farmland (i.e., the Farmland preserved would still likely be preserved anyhow). Even

if Farmland would be preserved elsewhere in Riverside County, the Important Farmland in the City would be developed, resulting in a net loss of Farmland. Therefore, for these reasons outlined above and in this paragraph, it would not prevent significant impacts from occurring in City and would not be an effective CEQA mitigation measure, nor is this mitigation measure feasible from an economic perspective within this region.

## 5.2.8 Level of Significance After Mitigation

### Impact 5.2-1

Development of the General Plan Update would convert Farmland to non-agricultural use. While mitigation measures were considered; they would not fully mitigate the direct loss of farmlands associated with the implementation of the General Plan Update because there would still be a net reduction in the total amount of land suitable for agricultural use. Consequently, the associated loss of agricultural production under Impact 5.2-1 would be a significant impact.

### Impact 5.2-2

Development of the General Plan Update would convert Williamson Act Land to non-agricultural use in the SOI. Consequently, the associated loss of agricultural preserve lands under Impact 5.2-2 would be a significant impact.

## 5.2.9 References

Riverside, County of. County Clerk-Recorder. 2019. Agricultural Preserve Information.

California Department of Conservation (CDC), Division of Land Resources. 2016. Farmland Mapping and Monitoring Program 2016

# 5. Environmental Analysis
## AGRICULTURE AND FORESTRY RESOURCES

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# 5.3 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the City of Corona General Plan Technical Update (General Plan Update) and Climate Action Plan (CAP) to impact air quality. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (SCAQMD). The analysis in this section is based on buildout of the proposed project, as modeled using the California Air Resources Board's (CARB) Emissions Factor Model (EMFAC2017), and the Off-Road Emissions Factor Model (OFFROAD2017); energy use provided by Southern California Edison, Corona Department of Water and Power, and the Southern California Gas Company; and vehicle miles traveled provided by Fehr & Peers (see Appendix L to this DEIR). The criteria air pollutant emissions modeling for construction and operational phases are included in Appendix D of this DEIR. Cumulative impacts related to air quality are based on the regional boundaries of the South Coast Air Basin (SoCAB).

## Terminology

The following are definitions for terms used throughout this section.

- **AAQS:** Ambient Air Quality Standards
- **ADT:** Average daily trip
- **Concentrations:** Refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$).
- **Criteria Air Pollutants:** Those air pollutants specifically identified for control under the Federal Clean Air Act (currently six: carbon monoxide, nitrogen oxides, lead, sulfur oxides, ozone and particulates).
- **DPM:** Diesel particulate matter
- **Emissions:** Refers to the actual quantity of pollutant, measured in pounds per day or tons per year.
- **ppm:** Parts per million
- **Sensitive receptor:** Land uses that are considered more sensitive to air pollution compared to others due to the types of population groups or activities involved. These land uses include residential, retirement facilities, hospitals, and schools.
- **TAC:** Toxic air contaminant
- **$\mu g/m^3$:** Micrograms per cubic meter
- **VMT:** Vehicle miles traveled

# 5.3.1 Environmental Setting

## 5.3.1.1 REGULATORY FRAMEWORK

Ambient air quality standards have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of toxic air contaminants. Land uses in the City of Corona and its sphere of influence (SOI) are subject to the rules and regulations imposed by the SCAQMD as well as the California AAQS adopted by CARB and National AAQS adopted by the United States Environmental Protection Agency (EPA). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized in this section.

### Federal and State Laws

#### *Ambient Air Quality Standards*

The Clean Air Act was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or to include other pollutants. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.3-1, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are ozone ($O_3$), nitrogen dioxide ($NO_2$), carbon monoxide (CO), sulfur dioxide ($SO_2$), coarse inhalable particulate matter ($PM_{10}$), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Table 5.3-1 Ambient Air Quality Standards for Criteria Pollutants

| Pollutant | Averaging Time | California Standard[1] | Federal Primary Standard[2] | Major Pollutant Sources |
|---|---|---|---|---|
| Ozone ($O_3$)[3] | 1 hour | 0.09 ppm | * | Motor vehicles, paints, coatings, and solvents. |
| | 8 hours | 0.070 ppm | 0.070 ppm | |
| Carbon Monoxide (CO) | 1 hour | 20 ppm | 35 ppm | Internal combustion engines, primarily gasoline-powered motor vehicles. |
| | 8 hours | 9.0 ppm | 9 ppm | |
| Nitrogen Dioxide ($NO_2$) | Annual Arithmetic Mean | 0.030 ppm | 0.053 ppm | Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads. |
| | 1 hour | 0.18 ppm | 0.100 ppm | |
| Sulfur Dioxide ($SO_2$) | Annual Arithmetic Mean | * | 0.030 ppm | Fuel combustion, chemical plants, sulfur recovery plants, and metal processing. |
| | 1 hour | 0.25 ppm | 0.075 ppm | |
| | 24 hours | 0.04 ppm | 0.14 ppm[2] | |
| Respirable Coarse Particulate Matter ($PM_{10}$) | Annual Arithmetic Mean | 20 µg/m$^3$ | * | Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays). |
| | 24 hours | 50 µg/m$^3$ | 150 µg/m$^3$ | |
| Respirable Fine Particulate Matter ($PM_{2.5}$)[4] | Annual Arithmetic Mean | 12 µg/m$^3$ | 12 µg/m$^3$ | Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays). |
| | 24 hours | * | 35 µg/m$^3$ | |
| Lead (Pb) | 30-Day Average | 1.5 µg/m$^3$ | * | Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline. |
| | Calendar Quarter | * | 1.5 µg/m$^3$ | |
| | Rolling 3-Month Average | * | 0.15 µg/m$^3$ | |
| Sulfates ($SO_4$)[5] | 24 hours | 25 µg/m$^3$ | * | Industrial processes. |
| Visibility Reducing Particles | 8 hours | ExCo =0.23/km visibility of 10≥ miles | * | Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. |

Table 5.3-1 Ambient Air Quality Standards for Criteria Pollutants

| Pollutant | Averaging Time | California Standard[1] | Federal Primary Standard[2] | Major Pollutant Sources |
|---|---|---|---|---|
| Hydrogen Sulfide | 1 hour | 0.03 ppm | * | Hydrogen sulfide ($H_2S$) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. |
| Vinyl Chloride | 24 hour | 0.01 ppm | * | Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents. |

Source: CARB 2016a.
Notes: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
1 California standards for $O_3$, CO (except 8-hour Lake Tahoe), $SO_2$ (1 and 24 hour), $NO_2$, and particulate matter ($PM_{10}$, $PM_{2.5}$, and visibility reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California AAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2 National standards (other than $O_3$, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The $O_3$ standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For $PM_{10}$, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
4 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were maintained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour $PM_{10}$ standards (primary and secondary) of 150 $\mu g/m^3$ also were maintained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
5 On June 2, 2010, a new 1-hour $SO^2$ standard was established, and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- **AB 1493: Pavley Fuel Efficiency Standards.** Pavley I is a clean-car standard that reduces greenhouse gas (GHG) emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025.

- **Heavy-Duty (Tractor-Trailer) GHG Regulation**. The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling

resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices

- **SB 1078 and SB 107: Renewables Portfolio Standards.** A major component of California's Renewable Energy Program is the renewables portfolio standard (RPS) established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010.

- **California Code of Regulations (CCR), Title 20: Appliance Energy Efficiency Standards.** The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the California Energy Commission (CEC) on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances.

- **24 CCR, Part 6: Building and Energy Efficiency Standards.** Energy conservation standards for new residential and non-residential buildings adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977.

- **24 CCR, Part 11: Green Building Standards Code.** Establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.[1]

### *Tanner Air Toxics Act and Air Toxics "Hot Spot" Information and Assessment Act*

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California legislature enacted a program to identify the health effects of TACs and to reduce exposure to them. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health" (17 CCR § 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 U.S. Code § 7412[b]) is a toxic air contaminant. Under state law, the California EPA, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate "toxics best available control technology" to minimize emissions. To

[1] The green building standards became mandatory in the 2010 edition of the code.

date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- **13 CCR Chapter 10 § 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.** Generally restricts on-road diesel-powered commercial motor vehicles with a gross vehicle weight rating of greater than 10,000 pounds from idling more than five minutes.
- **13 CCR Chapter 10 § 2480: Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools.** Generally restricts a school bus or transit bus from idling for more than five minutes when within 100 feet of a school.
- **13 CCR § 2477 and Article 8: Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate.** Regulations established to control emissions associated with diesel-powered TRUs.

## Air Pollutants of Concern

### *Criteria Air Pollutants*

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides ($NO_x$), sulfur dioxide ($SO_2$), coarse inhalable particulate matter ($PM_{10}$), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, $SO_2$, $NO_2$, $PM_{10}$, and $PM_{2.5}$ are "criteria air pollutants," which means that AAQS have been established for them. VOC and $NO_x$ are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone ($O_3$) and nitrogen dioxide ($NO_2$) are the principal secondary pollutants. Each of the primary and secondary criteria air pollutants and its known health effects are described here.

Table 5.3-2, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

Table 5.3-2 Criteria Air Pollutant Health Effects Summary

| Pollutant | Health Effects | Examples of Sources |
|---|---|---|
| Carbon Monoxide (CO) | • Chest pain in heart patients<br>• Headaches, nausea<br>• Reduced mental alertness<br>• Death at very high levels | Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves |
| Ozone ($O_3$) | • Cough, chest tightness<br>• Difficulty taking a deep breath<br>• Worsened asthma symptoms<br>• Lung inflammation | Atmospheric reaction of organic gases with nitrogen oxides in sunlight |
| Nitrogen Dioxide ($NO_2$) | • Increased response to allergens<br>• Aggravation of respiratory illness | Same as carbon monoxide sources |
| Particulate Matter ($PM_{10}$ & $PM_{2.5}$) | • Hospitalizations for worsened heart diseases<br>• Emergency room visits for asthma<br>• Premature death | Cars and trucks (particularly diesels)<br>Fireplaces and woodstoves<br>Windblown dust from overlays, agriculture, and construction |
| Sulfur Dioxide ($SO_2$) | • Aggravation of respiratory disease (e.g., asthma and emphysema)<br>• Reduced lung function | Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes |
| Lead (Pb) | • Behavioral and learning disabilities in children<br>• Nervous system impairment | Contaminated soil |

Source: CARB 2009; SCAQMD 2005.

**Carbon Monoxide** is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (SCAQMD 2005; USEPA 2018). The South Coast Air Basin (SoCAB) is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2017b).

**Nitrogen Oxides** are a by-product of fuel combustion and contribute to the formation of ground-level $O_3$, $PM_{10}$, and $PM_{2.5}$. The two major forms of $NO_X$ are nitric oxide (NO) and nitrogen dioxide ($NO_2$). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of $NO_X$ produced by combustion is NO, but NO reacts quickly with oxygen to form $NO_2$, creating the mixture of NO and $NO_2$ commonly called $NO_X$. $NO_2$ is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, $NO_2$ is only potentially irritating. $NO_2$ absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. $NO_2$ exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term $NO_2$ exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies

show a connection between elevated short-term $NO_2$ concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (SCAQMD 2005; USEPA 2018). Secondary effects of NOx include nitrogen deposition effects on plants. Nitrogen deposition effects on plants can have a range of effects on terrestrial and aquatic ecosystems, including increased plant growth, decreased plant biodiversity, soil acidification, increased invasive species, increased damages from pests and frost, and elevated nitrogen pollution to surface waters impacting aquatic biota (EPA 2019a). The SoCAB is designated an attainment area for $NO_2$ under the National and California AAQS (CARB 2017b).

**Sulfur Dioxide** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of $SO_2$. When sulfur dioxide forms sulfates ($SO_4$) in the atmosphere, together these pollutants are referred to as sulfur oxides ($SO_X$). Thus, $SO_2$ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, $SO_2$ may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to $SO_2$, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations and when combined with particulates, $SO_2$ may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (SCAQMD 2005; USEPA 2018). The SoCAB is designated attainment under the California and National AAQS (CARB 2017b).

**Suspended Particulate Matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or $PM_{10}$, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤10 millionths of a meter or 0.0004 inch). Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤2.5 millionths of a meter or 0.0001 inch). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both $PM_{10}$ and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than $PM_{10}$ to contribute to health effects and at far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (SCAQMD 2005). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), have human health implications, because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (SCAQMD 2013). However, the EPA or CARB has yet to adopt AAQS to regulate these particulates. Diesel particulate matter is classified by CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[2] environmental damage,[3] and aesthetic

[2] $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.

damage[4] (SCAQMD 2005; USEPA 2018). The SoCAB is a nonattainment area for $PM_{2.5}$ under California and National AAQS and a nonattainment area for $PM_{10}$ under the California AAQS (CARB 2017b).[5]

**Ozone**, or $O_3$, is a key ingredient of "smog" and is a gas that is formed when VOCs and $NO_X$, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. $O_3$ is a secondary criteria air pollutant. $O_3$ concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. $O_3$ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing $O_3$ can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level $O_3$ also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. $O_3$ also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, $O_3$ harms sensitive vegetation during the growing season (SCAQMD 2005; USEPA 2018). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2017b).

**Volatile Organic Compounds** are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (SCAQMD 2005). There are no AAQS for VOCs, meaning that no health-based criteria established by the EPA or CARB. However, because they contribute to the formation of $O_3$, SCAQMD has established a significance threshold. The health effects for ozone, which VOC contributes to the formation of, are described above.

**Lead** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (SCAQMD 2005; USEPA 2018). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and

[3] Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

[4] Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

[5] CARB approved the SCAQMD's request to redesignate the South Coast Air Basin (SoCAB) from serious nonattainment for $PM_{10}$ to attainment for $PM_{10}$ under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour $PM_{10}$ standards from 2004 to 2007. The EPA approved the State of California's request to redesignate the South Coast $PM_{10}$ nonattainment area to attainment of the $PM_{10}$ National AAQS, effective on July 26, 2013.

1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted more strict lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.[6] As a result of these violations, the Los Angeles County portion of the SoCAB is designated as nonattainment under the National AAQS for lead (SCAQMD 2012; CARB 2017b). There are no lead-emitting sources associated with this project, and therefore, lead is not a pollutant of concern for the proposed project.

### *Toxic Air Contaminants*

People exposed to toxic air pollutants at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory and other health problems (USEPA 2019b). By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. Since no safe levels of TACs can be determined, there are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most relevant to the project being particulate matter from diesel-fueled engines.

#### *Diesel Particulate Matter*

In 1998, CARB identified diesel particulate matter as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. Long-term (chronic) inhalation of DPM is likely a lung cancer risk. Short-term (i.e., acute) exposure can cause irritation and inflammatory systems and may exacerbate existing allergies and asthma systems (USEPA 2002).

#### *Community Risk*

To reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when siting sensitive receptors near existing pollution sources. CARB's recommendations were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity substantially increases exposure and the potential for adverse health effects. Three carcinogenic TACs constitute the majority of the known

[6] Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (SCAQMD 2012).

health risks from motor vehicle traffic—DPM from trucks and benzene and 1,3 butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

In 2017, CARB provided a supplement to the *Air Quality and Land Use Handbook* for near-roadway air pollution exposure, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory* (CARB 2017a). Strategies to reduce exposure include practices and technologies that reduce traffic emissions, increase dispersion of traffic pollution (or the dilution of pollution in the air), or remove pollution from the air.

## Regional Regulations

The State is divided into air pollution control districts/air quality management districts. These agencies are county or regional governing authorities that have primary responsibility for controlling air pollution from stationary sources. CARB and local air districts are also responsible for developing clean air plans to demonstrate how and when California will attain AAQS established under both the federal and California Clean Air Acts. For the areas within California that have not attained air quality standards, CARB works with air districts to develop and implement state and local attainment plans. In general, attainment plans contain a discussion of ambient air quality data and trends; a baseline emissions inventory; future year projections of emissions, which account for growth projections and already adopted control measures; a comprehensive control strategy of additional measures needed to reach attainment; an attainment demonstration, which generally involves complex modeling; and contingency measures. Plans may also include interim milestones for progress toward attainment. The SoCAB is managed by SCAQMD.

### *SCAQMD Air Quality Management Planning*

The SCAQMD is the air pollution control agency for all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. This area of 10,743 square miles is home to over 16.8 million people—about half the population of the whole state of California. It is the second most populated urban area in the United States and one of the smoggiest. The SCAQMD operates 37 permanent monitoring stations and 5 single-pollutant source impact lead (Pb) air monitoring sites in the SoCAB and a portion of the Salton Sea Air Basin in Coachella Valley (SCAQMD 2019c).

The SCAQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. It is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

#### *2016 AQMP*

On March 3, 2017, SCAQMD adopted the 2016 AQMP, an update to the 2012 AQMP. The 2016 AQMP addresses strategies and measures to attain the following National AAQS:

- 2008 8-hour ozone standard by 2031
- 2012 annual $PM_{2.5}$ standard by 2025[7]
- 2006 24-hour $PM_{2.5}$ standard by 2019
- 1997 8-hour ozone standard by 2023
- 1979 1-hour ozone standard by year 2022

It is projected that total $NO_X$ emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022 (SCAQMD 2017), which requires reducing $NO_X$ emissions in the SoCAB to 250 tpd. This is approximately 45 percent additional reductions above existing regulations for the 2023 ozone standard and 55 percent additional reductions above existing regulations to meet the 2031 ozone standard.

Reducing $NO_X$ emissions would also reduce $PM_{2.5}$ concentrations in the SoCAB. However, as the goal is to meet the 2012 federal annual $PM_{2.5}$ standard no later than year 2025, SCAQMD is seeking to reclassify the SoCAB from "moderate" to "serious" nonattainment under this federal standard. A "moderate" nonattainment would require meeting the 2012 federal standard by no later than 2021.

The 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. The 2016 AQMP includes 15 measures to reduce mobile source emissions. These measures include identifying actions to mitigate and reduce emissions associated with new development and redevelopment projects, to reduce facility-based (i.e., commercial marine ports, rail yards and intermodal facilities, warehouse and distribution centers, and commercial airports in addition to new and redevelopment projects), on-road, and off-road mobile sources of emissions, and also to identify the benefits of incentive programs in reducing emissions. The SCAQMD has established working groups to plan and implement the facility-based mobile source measures. Currently, SCAQMD is reviewing the feasibility of implementation of an indirect source review program to reduce emissions from new development of commercial, residential, and industrial projects that do not fall within the other facility-based mobile source measures (SCAQMD 2019a). Additionally, SCAQMD is also reviewing a program to facilitate local and regional emission reductions through actions and investments at warehouses (SCAQMD 2019d). Overall, strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA (SCAQMD 2017).

### *Lead State Implementation Plan*

In 2008, the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of Industry that exceeded the new standard in the 2007-to-2009 period. The remainder of the SoCAB, outside the Los Angeles County nonattainment area, remains in attainment of the new 2008 lead standard. On May 24, 2012, CARB approved the State Implementation Plan (SIP) revision for the federal lead standard,

[7] The 2016 AQMP requests a reclassification from moderate to serious non-attainment for the 2012 National $PM_{2.5}$ standard.

which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to the EPA for approval.

### *SCAQMD Rules and Regulations*

All projects are subject to SCAQMD rules and regulations in effect at the time of activity, including:

- **Rule 401, Visible Emissions.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in visible emissions. Specifically, the rule prohibits the discharge of any air contaminant into the atmosphere by a person from any single source of emission for a period or periods aggregating more than three minutes in any one hour that is as dark as or darker than designated No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.

- **Rule 402, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403, Fugitive Dust.** This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust, and requires best available control measures to be applied to earth moving and grading activities.

- **Rule 445, Wood Burning Devices.** This rule is intended to reduce the emission of particulate matter from wood-burning devices and applies to manufacturers and sellers of wood-burning devices, commercial sellers of firewood, and property owners and tenants that operates a wood-burning device.

- **Rule 1113, Architectural Coatings.** This rule limits the VOC content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the SCAQMD must comply with the current VOC standards set in this rule.

- **Rule 1403, Asbestos Emissions from Demolition/Renovation Activities.** The purpose of this rule is to specify work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. All operators are

required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

#### 5.3.1.2 EXISTING CONDITIONS

### South Coast Air Basin Meteorology

The City of Corona and its SOI is in the SoCAB, which includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills; it is bounded by the Pacific Ocean in the southwest quadrant, and high mountains form the remainder of the perimeter. The general region lies in the semipermanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (SCAQMD 2005).

#### *Temperature and Precipitation*

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. Per the measurements recorded by the Corona Climatological Monitoring Station (ID 042031), the average low is reported at 65.3°F in January, and the average high is 92.3°F in July (WRCC 2019).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall averages 12.71 inches per year in the project area (WRCC 2019).

#### *Humidity*

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (SCAQMD 2005).

#### *Wind*

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological

conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (SCAQMD 2005).

### *Inversions*

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. A marine/subsidence inversion can typically occur when cool onshore winds undercut a dome of warm sinking air, which creates a layer of warm air that traps pollution below. Radiation inversions are surface-based and can typically be formed during the nighttime when the ground cools, resulting in warmer air further away from the surface. The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the Project Area (SCAQMD 2005).

## South Coast Air Basin Attainment Status

The AQMP provides the framework for air quality basins to achieve attainment of the California and National AAQS through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the ambient air quality standards. Severity classifications for nonattainment are marginal, moderate, serious, severe, and extreme.

- **Unclassified:** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- **Attainment:** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- **Nonattainment:** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- **Nonattainment/Transitional:** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 5.3-3, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*. The SoCAB is designated in attainment of the California AAQS for sulfates and designated a nonattainment area for lead (Los Angeles County only) under the National AAQS.

Table 5.3-3 Attainment Status of Criteria Pollutants in the South Coast Air Basin

| Pollutant | State | Federal |
|---|---|---|
| Ozone – 1-hour | Nonattainment | No Federal Standard |
| Ozone – 8-hour | Extreme Nonattainment | Extreme Nonattainment |
| $PM_{10}$ | Serious Nonattainment | Attainment |
| $PM_{2.5}$ | Nonattainment | Nonattainment |
| CO | Attainment | Attainment |
| $NO_2$ | Attainment | Attainment/Maintenance |
| $SO_2$ | Attainment | Attainment |
| Lead | Attainment | Nonattainment (Los Angeles County only)[1] |
| All others | Attainment/Unclassified | Attainment/Unclassified |

Source: CARB 2017b.
[1] In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new federal and existing state AAQS as a result of large industrial emitters. Remaining areas within the SoCAB are unclassified.

## Existing Ambient Air Quality

Existing ambient air quality, historical trends, and projections in the vicinity of the City and SOI are best documented by measurements made by SCAQMD. The City and SOI area generally within Source Receptor Area (SRA) 22–Riverside Valley (Corona/Norco Area). The air quality monitoring station closest to the City and SOI is the Norco-Norconian Monitoring Station. This station only monitors $PM_{10}$. Additional data for $O_3$, $NO_2$, CO, $SO_2$, and $PM_{2.5}$ are supplied by the Riverside Rubidoux Monitoring Station. The most current five years of data monitored at these stations are included in Table 5.3-4, *Ambient Air Quality Monitoring Summary*. The data show recurring violations of the state (1-hr and 8-hr) and federal (8-hr) $O_3$ standards. The area regularly exceeds the state $PM_{10}$ standard and the federal $PM_{2.5}$ standard. The CO, $NO_2$, and $SO_2$ standards have not been violated in the last five years in the project vicinity.

Table 5.3-4 Ambient Air Quality Monitoring Summary

| Pollutant/Standard | Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations | | | | |
|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 |
| **Ozone ($O_3$)** | | | | | |
| State 1-Hour ≥ 0.09 ppm (days exceed threshold) | 29 | 31 | 33 | 47 | 22 |
| State 8-hour ≥ 0.07 ppm (days exceed threshold) | 69 | 59 | 71 | 82 | 57 |
| Federal 8-Hour > 0.070 ppm (days exceed threshold) | 66 | 55 | 69 | 81 | 53 |
| Max. 1-Hour Conc. (ppm) | 0.141 | 0.132 | 0.142 | 0.145 | 0.123 |
| Max. 8-Hour Conc. (ppm) | 0.104 | 0.105 | 0.104 | 0.118 | 0.101 |
| **Carbon Monoxide (CO)** | | | | | |
| State 8-Hour > 9.0 ppm (days exceed threshold) | 0 | * | * | * | * |
| Federal 8-Hour ≥ 9.0 ppm (days exceed threshold) | 0 | * | * | * | * |
| Max. 8-Hour Conc. (ppm) | 1.59 | * | * | * | * |
| **Nitrogen Dioxide ($NO_2$)** | | | | | |
| State 1-Hour ≥ 0.18 ppm (days exceed threshold) | 0 | 0 | 0 | 0 | 0 |
| Federal 1-Hour ≥ 0.100 ppm (days exceed threshold) | 0 | 0 | 0 | 0 | 0 |
| Max. 1-Hour Conc. (ppb) | 0.0599 | 0.0574 | 0.0731 | 0.0630 | 0.0554 |
| **Sulfur Dioxide ($SO_2$)** | | | | | |
| State 24-Hour ≥ 0.04 ppm (days exceed threshold) | * | * | * | * | * |
| Federal 24-Hour ≥ 0.14 ppm (days exceed threshold) | * | * | * | * | * |
| Max 24-Hour Conc. (ppm) | * | * | * | * | * |
| **Coarse Particulates ($PM_{10}$)** | | | | | |
| State 24-Hour > 50 µg/m$^3$ (days exceed threshold) | 3 | 3 | 7 | 8 | 3 |
| Federal 24-Hour > 150 µg/m$^3$ (days exceed threshold) | 0 | 0 | 0 | 0 | 0 |
| Max. 24-Hour Conc. (µg/m$^3$) | 64.0 | 85.0 | 62.4 | 85.1 | 100.9 |
| **Fine Particulates ($PM_{2.5}$)** | | | | | |
| Federal 24-Hour > 35 µg/m$^3$ (days exceed threshold) | 5 | 9 | 5 | 7 | 3 |
| Max. 24-Hour Conc. (µg/m$^3$)[1] | 48.9 | 54.7 | 51.5 | 50.3 | 66.3 |

Source: CARB 2019. Data for $O_3$, CO, $NO_2$, $SO_2$, and $PM_{2.5}$ are from the Riverside Rubidoux Monitoring Station while $PM_{10}$ is based on data from the Norco Monitoring Station.

Notes: ppm = parts per million; ppb = parts per billion, µg/m$^3$ = micrograms per cubic meter

* Data not available.

[1] Data includes exceptional events, such as wildfires.

## SoCAB Multiple Air Toxics Exposure Study IV

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and the potential health risks from air toxics in the SoCAB. In 2008, SCAQMD conducted its third update to the MATES study (MATES III) based on the Office of Environmental Health Hazards Assessment (OEHHA) 2003 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (2003 HRA Guidance Manual). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, which accounted for 84 percent of the cancer risk (SCAQMD 2008b).

SCAQMD recently released the fourth update (MATES IV), which was also based on OEHHA's 2003 HRA Guidance Manual. The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources, and 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, which accounted for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basinwide population-weighted risk decreased by approximately 57 percent since MATES III (SCAQMD 2015a).

OEHHA updated the guidelines for estimating cancer risks on March 6, 2015. The new method uses higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on breathing rates and length of residential exposures. When combined together, SCAQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher than the risk identified in MATES IV using the 2015 OEHHA guidance methodology (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (SCAQMD 2015a). In the City of Corona and SOI, the estimated cancer risk is highest in areas surrounding I-91 between Highway 71 and I-15 (1,034 in one million overall excess cancer risk) and lowest in the southern portion of the City and SOI near the Cleveland National Forest (221 in one million overall excess cancer risk) (SCAQMD 2015b).

## Existing Emissions

Table 5.3-5, *Existing City and SOI Regional Criteria Air Pollutant Emissions Inventory*, identifies the existing criteria air pollutant emissions inventory using emission rates for year 2018 (current conditions). The inventories are based on existing land uses in the City and SOI. The Year 2018 inventory represents the projected emissions currently generated by existing land uses using the baseline year 2018 emission factors for on-road vehicles.

Table 5.3-5 Existing City and SOI Regional Criteria Air Pollutant Emissions Inventory

| Sector | Criteria Air Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | $NO_X$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Year 2018 | | | | | | |
| Transportation[1] | 422 | 4,261 | 11,274 | 37 | 558 | 266 |
| Energy (natural gas use) | 130 | 1,143 | 720 | 7 | 90 | 90 |
| Area – Light Commercial Equipment[2] | 87 | 565 | 2,249 | 1 | 29 | 25 |
| Area – Construction/Agriculture[2] | 18 | 155 | 268 | <1 | 8 | 7 |
| Area – Consumer Products[3] | 3,652 | 0 | 0 | 0 | 0 | 0 |
| Total | 4,309 | 6,125 | 14,511 | 45 | 684 | 388 |

Sources:
[1] EMFAC2017 Version 1.0.2. Based on daily VMT provided by Fehr & Peers. Transportation sector includes the full trip length for internal-internal trips and 50 percent trip length for external-internal/internal-external trips. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).
[2] OFFROAD2017 Version 1.0.1. Light commercial equipment emissions estimated based on employment for the City of Corona as a percentage of Riverside County. Construction emissions estimated based on housing permit data for Riverside County and the City of Corona from the US Census. Agricultural emissions estimated based on agricultural jobs in the City of Corona as a percentage of Riverside County. Excludes fugitive emissions from construction sites and wood-burning fireplaces. Various industrial and commercial processes (e.g., manufacturing, dry cleaning) allowed under proposed General Plan would require permitting and would be subject to further study pursuant to SCAQMD Regulation XIII, New Source Review. Because the nature of those emissions cannot be determined at this time and are subject to further regulation and permitting, they would be speculative and are not included in the table.
[3] Based on the California Emissions Estimator Model (CalEEMod), Version 2016.3.2, methodology utilized to calculate VOC emissions from use of household consumer cleaning products.

Criteria air pollutant emissions generated within the City and SOI were estimated using EMFAC2017, OFFROAD2017, and data provided by SoCal Gas for natural gas use. Emissions within the City and SOI come from the following sources:

- **Transportation:** Emissions from vehicle trips beginning and ending within the City and SOI (i.e., internal/internal vehicle trips) and from trips that either begin or end within the City and SOI, but not both (i.e., external/internal vehicle trips).
- **Area Sources:** Emissions from light commercial equipment use, construction equipment use, and agricultural equipment use.
- **Energy:** Emissions generated from natural gas consumption used for cooking and heating in the City and SOI.

## Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise

places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

## 5.3.2 Thresholds of Significance

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

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

AQ-3 Expose sensitive receptors to substantial pollutant concentrations.

AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

### 5.3.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

The analysis of the project's air quality impacts follows the guidance and methodologies recommended in SCAQMD's *CEQA Air Quality Handbook* (Handbook) and the significance thresholds on SCAQMD's website (SCAQMD 1993).[8] CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. SCAQMD has established regional thresholds of significance. In addition to the regional thresholds, projects are subject to the AAQS.

#### Regional Significance Thresholds

SCAQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB. Table 5.3-6, *SCAQMD Significance Thresholds*, lists thresholds that are applicable for all projects uniformly regardless of size or scope. There is growing evidence that although ultrafine particulates contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA and CARB have not yet adopted AAQS to regulate ultrafine particulates; therefore, SCAQMD has not developed thresholds for them.

[8] The SCAQMD is currently in the process developing an "Air Quality Analysis Guidance Handbook" to replace its CEQA Air Quality Handbook. While the new handbook is being prepared, SCAQMD has made available supplemental information and guidance including updated significance thresholds, of which this analysis utilizes. The SCAQMD's Air Quality Significance Thresholds are current as of March 2015 and can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook.

Table 5.3-6 SCAQMD Significance Thresholds

| Air Pollutant | Construction Phase | Operational Phase |
|---|---|---|
| Reactive Organic Gases (ROG) | 75 lbs/day | 55 lbs/day |
| Carbon Monoxide (CO) | 550 lbs/day | 550 lbs/day |
| Nitrogen Oxides ($NO_X$) | 100 lbs/day | 55 lbs/day |
| Sulfur Oxides ($SO_X$) | 150 lbs/day | 150 lbs/day |
| Particulates ($PM_{10}$) | 150 lbs/day | 150 lbs/day |

Source: SCAQMD 2019b.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems.

- Linked to increased cancer risk ($PM_{2.5}$, TACs)
- Aggravates respiratory disease ($O_3$, $PM_{2.5}$)
- Increases bronchitis ($O_3$, $PM_{2.5}$)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath ($O_3$)
- Reduces resistance to infections and increases fatigue ($O_3$)
- Reduces lung growth in children ($PM_{2.5}$)
- Contributes to heart disease and heart attacks ($PM_{2.5}$)
- Contributes to premature death ($O_3$, $PM_{2.5}$)
- Linked to lower birth weight in newborns ($PM_{2.5}$) (SCAQMD 2000)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of $PM_{2.5}$ is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists' landmark children's health study found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (SCAQMD 2015c).

Mass emissions in Table 5.3-4 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. Therefore, regional emissions from a single project do not trigger a regional health impact, and it is speculative to identify how many more individuals in the air basin would be affected by the health effects listed above. In addition, the analysis to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment is within the scope of the AQMP. SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB. To achieve the health-based standards established by the EPA, SCAQMD prepares an AQMP that details regional programs to attain the AAQS.

## Localized Significance Thresholds

The SCAQMD identifies localized significance thresholds (LSTs), shown in Table 5.3-7, *SCAQMD Localized Significance Thresholds*. Emissions of $NO_2$, CO, $PM_{10}$, and $PM_{2.5}$ generated at a project site (offsite mobile-source emissions are not included in the LST analysis) could expose sensitive receptors to substantial concentrations of criteria air pollutants. A project that generates emissions that trigger a violation of the AAQS when added to the local background concentrations would cause a significant impact.

Table 5.3-7 SCAQMD Localized Significance Thresholds

| Air Pollutant (Relevant AAQS) | Concentration |
|---|---|
| 1-Hour CO Standard (CAAQS)[1] | 20 ppm |
| 8-Hour CO Standard (CAAQS/NAAQS) | 9.0 ppm |
| 1-Hour $NO_2$ Standard (CAAQS) | 0.18 ppm |
| Annual Average $NO_2$ Standard (CAAQS)[1] | 0.03 ppm |
| 24-Hour $PM_{10}$ Standard – Construction (SCAQMD)[2] | 10.4 µg/m$^3$ |
| 24-Hour $PM_{2.5}$ Standard – Construction (SCAQMD)[2] | 10.4 µg/m$^3$ |
| 24-Hour $PM_{10}$ Standard – Operation (SCAQMD)[2] | 2.5 µg/m$^3$ |
| 24-Hour $PM_{2.5}$ Standard – Operation (SCAQMD)[2] | 2.5 µg/m$^3$ |
| Annual Average $PM_{10}$ Standard (SCAQMD)[2] | 1.0 µg/m$^3$ |

Source: SCAQMD 2019b.
ppm = parts per million; µg/m$^3$ = micrograms per cubic meter; CAAQS = California AAQS; NAAQS = National AAQS
[1] Based on the more restrictive California AAQS for CO and $NO_2$.
[2] Threshold is based on SCAQMD Rule 403. Since the SoCAB is in nonattainment for $PM_{10}$ and $PM_{2.5}$, the threshold is established as an allowable change in concentration. Therefore, background concentration is not relevant.

## CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles and introduction of cleaner fuels, as well as implementation of control technology on industrial facilities, CO concentrations in the SoCAB and the state have steadily declined.

## Health Risk Analysis

Whenever a project would require use of chemical compounds that have been identified in SCAQMD Rule 1401; placed on CARB's air toxics list pursuant to AB 1807, the Air Contaminant Identification and Control Act (1983); or placed on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by SCAQMD. Table 5.3-8, *SCAQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists SCAQMD's TAC incremental risk thresholds for operation of a project. Projects that do not generate emissions that exceed the values in Table 5.3-7 would not substantially contribute to cumulative air

quality hazards or exacerbate an existing environmental hazard. Residential, commercial, office, and institutional uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards. Therefore, these thresholds are typically applied to new industrial projects.

Table 5.3-8 SCAQMD Toxic Air Contaminants Incremental Risk Thresholds

| | |
|---|---|
| Maximum Individual Cancer Risk | ≥ 10 in 1 million |
| Cancer Burden (in areas ≥ 1 in 1 million) | > 0.5 excess cancer cases |
| Hazard Index (project increment) | ≥ 1.0 |

Source: SCAQMD 2019b.

## 5.3.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential air quality impacts as a result of implementation of the proposed project.

### Circulation Element

#### *Local Thoroughfares and Routes*

- **CE-1.1** Implement complete streets by limiting capacity to only serve expected demand on City streets (e.g., do not overbuild roadways) while discouraging regional cut-through and maximizing accessibility for users to adjacent land uses in a safe and efficient way.

- **CE-1.4** Design and employ traffic control measures to ensure City streets and roads function with safety and efficiency.

- **CE-1.7** Limit driveway and local street access on arterial streets to maintain a desired quality of traffic flow. Wherever possible, consolidate driveways and implement access controls during redevelopment of adjacent parcels.

- **CE-1.10** Require a traffic analysis to be prepared in accordance with the City's adopted Traffic Impact Study Guidelines and require projects to mitigate impacts on the City's circulation system that exceed the City's adopted service thresholds for near term and future conditions.

#### *Intercity and Regional Transportation*

- **CE-2.1** Support RCTC and Caltrans efforts to improve management of the SR-91, I-15, and SR-71. Promote improvements that reduce regional cut-through traffic on City streets and work with RCTC and Caltrans to ensure that accessibility to these facilities is provided to Corona residents.

- **CE-2.2** Support regional transportation infrastructure that would provide alternative connections and access to neighboring counties and reduce the volume of cut-through traffic on City streets.

### *Transportation Management*

- **CE-3.1** Implement and maintain traffic signal coordination and advanced traffic management strategies throughout the City to the maximum extent practicable and integrate signal systems with adjacent jurisdictions and Caltrans.

- **CE-3.2** Implement, maintain, and enforce the traffic demand and system management recommendations in the South Coast Air Quality Management District's Air Quality Management Plan and in the Riverside County Congestion Management Program.

- **CE-3.3** Encourage employers to reduce vehicular trips by offering to employees commute trip reduction programs, such as transit fare subsidies, alternative work schedules and telecommuting, employer-sponsored van pools or shuttles, ride share programs, and bike share..

### *Public Transportation*

- **CE-4.1** Maintain local fixed-route and demand-responsive transit service to ensure mobility within Corona and to ensure that users have adequate access to public facilities, services, and employment options.

- **CE-4.2** Work with the Riverside Transit Agency to identify needs for additional bus services and enhancements to existing services.

- **CE-4.3** Encourage the development of additional regional public transportation services and facilities, including park-and-ride near the SR-91 and I-15 freeways and mobility hubs at key transit stations.

- **CE-4.4** Ensure public transit opportunities (e.g., fixed-route buses, paratransit) for elderly and disabled persons and accessibility of such services by elderly and disabled persons.

- **CE-4.5** Encourage employers to reduce single-occupant vehicular trips by providing employee incentives (e.g., reduced rate transit passes).

- **CE-4.6** Require new development to provide transit facilities, such as bus shelters and turnouts, where deemed necessary, to encourage the use of transit and other alternative forms of transportation.

- **CE-4.7** Preserve options for expanding future transit use when designing improvements for roadways or redeveloping major developments and including areas for transit facilities.

- **CE-4.8** Encourage access to and the expansion of regional rail transportation facilities and services at the Metrolink stations to increase ridership.

- **CE-4.9** Encourage the development of bus rapid transit systems along major transportation corridors where feasible.

- **CE-4.10** Improve first/last mile connections to improve transit use and accessibility. Explore use of transportation network companies, micro-transit, and other emerging technologies to strengthen the transit system.

### *Bicycle and Pedestrian Facilities*

- **CE-5.1** Provide for safety of bicyclists, equestrians, and pedestrians by adhering to national standards and uniform practices; adhere to accessibility requirements for people with disabilities.

- **CE-5.2** Maintain existing pedestrian facilities and encourage new development to provide walkways between and through developments.

- **CE-5.3** Provide for safe accessibility to and use of pedestrian facilities by people with disabilities to implement accessibility requirements under the American with Disabilities Act.

- **CE-5.4** Develop bicycle routes in accordance with the City's adopted Bicycle Master Plan and implement other elements of that plan.

- **CE-5.5** Develop and maintain a bikeway system that provides connections to routes of neighboring jurisdictions and regional bikeways.

- **CE-5.6** Encourage new and existing development to provide accessible and secure areas for bicycle storage. Provide bicycle racks or storage facilities at public facilities and require bicycle parking, storage, and other support facilities as part of new office and retail developments.

- **CE-5.7** Use easements and/or rights-or-way along flood control channels, public utilities, railroads, and streets wherever possible for bikeways and equestrian and hiking trails.

- **CE-5.8** Improve bicycling and pedestrian safety by minimizing conflict points (e.g., bicycle and vehicle crossings) with motorized traffic, separating bike routes and truck routes where possible, or adding and improving existing facilities with buffers/barriers to separate bikes from vehicle lanes.

- **CE-5.9** Coordinate with the Riverside County General Plan and the Santa Ana River Trails Plan to create an uninterrupted Class I bicycle route through Corona that connects to the Santa Ana River Trail in surrounding cities.

- **CE-5.10** Encourage and support safe bicycle riding on City streets. Provide bicycle safety and education programs through public outreach. Support future bikeway designs that minimize bicycle conflicts with vehicles, separate bikeways from vehicles where possible, and lower bicycle level of stress.

### *Goods Movement*

- **CE-6.1** Provide primary truck routes on selected arterial streets that will serve the business community while minimizing the impacts of through truck traffic into residential areas.

- **CE-6.2** Provide appropriately designed and maintained roadways in accordance with local, state, and federal standards for truck routes so that they can safely accommodate truck travel.

- **CE-6.3** Develop appropriate treatments along local truck routes to minimize noise and vibration impacts on sensitive land uses that are adjacent to or impacted by the truck route.

- **CE-6.4** Ensure that new development provides adequate on-site truck loading facilities and enforce prohibition of queuing of trucks on public streets or in other areas not intended for such uses.

- **CE-6.5** Monitor traffic and safety crossing conditions at grade railroad crossings; support at-grade and grade-separated improvements, when warranted, to improve local commerce, flow of traffic, or safety.

- **CE-6.6** Strive to minimize through truck traffic in residential neighborhoods and other areas not intended for such travel, and enforce City codes that restrict or prohibit trucks on certain streets.

- **CE-6.7** Work closely with other agencies on implementing improvements along the BNSF Transcomm route to facilitate rail movements, minimize roadway congestion, and reduce impacts on City roadways.

### *Parking*

- **CE-7.3** Encourage employers to include strategic parking provisions in new developments, where feasible, to encourage the use of transit and other modes of travel rather than single-occupancy autos.

- **CE-7.4** Accommodate joint use of parking facilities as part of an area plan or site plan, based on the peak parking demands of permitted uses in the planning area.

- **CE-7.5** Encourage the use of shared parking arrangements in areas with parking shortfalls, downtown and in appropriate mixed-use projects, and along the Sixth Street Mixed Use Boulevard corridor.

## Land Use Element

### *Type, Distribution, and Form of Land Uses*

- **LU-1.2** Emphasize the development of uses that sustain Corona as a cohesive, distinct, and self-sustaining community and minimize the need for residents to travel to surrounding communities for retail goods, services, and employment.

### *Community Quality and Sense of Space*

- **LU-6.1** Promote sustainable features in new construction and significant renovations, including the use of locally sourced, recycled, and sustainable-sourced building materials, energy- and water-efficient

building design, integrated renewable energy and energy storage systems, and waste minimization during construction.

- **LU-6.2** Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through:
  - Site design—concentration and intermixing of development to minimize vehicular trips and promote walking and building orientation for solar access and heat gain and loss
  - Landscaping—drought-tolerant species, use of recycled water for irrigation, and other purposes
  - Capture of rainwater and re-use on site
  - Building design and construction materials—energy-and water efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques

### *Residential Neighborhoods*

- **LU-8.2** Provide opportunities for the development of new housing adjacent to the Downtown and the Sixth Street corridor, which may include a variety of housing types, including mixed use projects, that integrate housing with commercial and office uses..
- **LU-8.3** Provide opportunities for housing that are in pace with adopted state legislation and allow for a variety of housing types such as integrating residential with commercial and office developments, near activity centers and in transit oriented areas near the Metrolink Station.
- **LU-8.4** Provide opportunities for "live-work" development to accommodate artists, craft persons, and professionals working from home as a buffer between residential and nonresidential uses in Downtown, North Main Street, and adjoining commercial and industrial corridors and districts.
- **LU-10.6** Establish a multi-use trail system that connects the rural and estate neighborhoods adjoining open spaces and parklands. These may be developed for pedestrians, bicycles, and/or for horseback riding where allowed by zoning.

### *Commercial and Office Districts*

- **LU-11.2** Maintain a range of retail commercial and office uses and districts in the City that are differentiated by their functional role, customer base, and physical form and character. Such districts include
  - Mixed-use Downtown that serves as the center of Corona's identity and activity; provides a wide range of retail, commercial, and specialty goods; and is designed and developed to emphasize pedestrian activity.

- Community retail districts that contain larger-format uses, national retailers, restaurants, and overnight accommodations, that serve the region and the local community, generally located in proximity to freeway off-ramps.
- Neighborhood shopping districts providing basic goods and services, such as grocery stores and personal services, within easy access and that are intended to serve the needs of residents living in nearby neighborhoods.

- **LU-11.6** Require that transit-supporting facilities, such as bus turnouts, passenger drop-offs, and shelters, be incorporated in new commercial centers or when subject to major renovation and improvement, where appropriate to support local, citywide, and regional transit systems. The location and type of facility should be coordinated with transit agencies.

#### *Industrial Districts*

- **LU-12.7** Regulate the development of industrial uses (consistent with local regulation and state law) that use, store, produce, or transport toxic and hazardous materials; generate unacceptable levels of air or noise pollution; or result in other adverse impacts.

- **LU-13.1** Accommodate mixed-use projects that integrate housing with retail, office, and other uses within the same structure or on the same site, or the development of the property exclusively for commercial and office uses in accordance with the land use plan's designations and applicable density standards and design and development policies.

- **LU-13.2** Limit retail commercial and professional office uses within a mixed-residential-commercial/office use development to those uses that are compatible with residential uses.

- **LU-13.3** Require that adequate open space and, for larger projects, recreational facilities be incorporated into mixed-use development projects to meet the need of their residents and improve overall aesthetics.

### Healthy Community Element

#### *Reduction in Pollution Exposure*

- **HC-2.5** Require the preparation of air quality, noise, and vibration technical studies to determine the impact of proposed new development on adjacent and surrounding land uses and to identify the appropriate measures required to mitigate such impacts.

### Housing Element (2013-2021)

- **HE-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

- **HE-1.4** Support the development of sustainable projects that reduce demand for water and energy resources, reduce commute times and operational costs, and provide for transit.

## Environmental Resources Element

### *Air Resources*

- **ER-12.1** Promote and encourage alternate employment work schedules for public- and private-sector businesses to achieve a reduction of employee-related motor vehicle emissions in accordance with SCAQMD Rule 2202.

- **ER-12.2** Continue to cooperate with the SCAQMD and other local authorities in the air basin, in implementing air emission reduction programs and techniques.

- **ER-12.3** Establish and strictly enforce controls on land use activities that contain operations or materials that individually or cumulatively add significantly to the degradation of air quality in Corona.

- **ER-12.4** Continue to expand the City-owned fleet of vehicles to alternative fuels, such as methanol or other clean-burning energy sources, as technology becomes feasible and cost-effective.

- **ER-12.5** Increase public transit ridership by periodically adjusting local routes, where feasible, and working with regional transit providers serving Corona and its Planning Area.

- **ER-12.6** Support major commercial centers and employment center projects, having 100 or more employees, to incorporate transit amenities, access points, and van and carpool parking as part of the project.

- **ER-12.7** Increase the number of Park and Ride locations within the Planning Area to encourage carpooling and vanpooling.

- **ER-12.8** Require new commercial and industrial development and redevelopment projects of sufficient scale and number of employees to provide adequate facilities for bicycles, such as bicycle racks located close to the front entranceways of buildings and shower facilities with lockers.

- **ER-12.9** Continue to incorporate bicycle lanes in all new and upgrade roadway projects in order to encourage commuter bicycle trips. Also, improve existing bicycle lanes for greater user safety.

- **ER-12.10** Support mixed-use commercial-residential development and continue to target residential development within and near existing planned activity centers and transportation corridors to improve the City's current jobs-housing ratio and reduce the number of vehicle trips.

- **ER-12.11** Require that large-scale master-planned residential communities incorporate pedestrian and cycling paths/trails that link with adjacent neighborhoods, schools, areas of shopping and employment, community centers, other places of activity, and transit access points.

- **ER-12.12** Provide effective utility of pedestrian and cycling paths/trails and place strong limitations on intrusions into these rights-of-way used for pedestrian and bicycling.

- **ER-12.13** Reduce particulate emissions from paved and unpaved roads, parking lots, and road and building construction through the implementation of best practices as deemed feasible by the City of Corona.

- **ER-12.14** Reduce energy consumed by commercial and residential uses by requiring the use and installation of energy conservation features in all new construction projects and wherever feasible, retrofitting existing and redevelopment projects.

- **ER-13.1** Maintain and periodically update a comprehensive Climate Action Plan that detail the City's strategies to reduce GHG emissions and to ensure ongoing and sustained reduction of GHG emissions from all sectors to meet 2020, 2030, and 2040 reduction targets.

- **ER-13.2** Encourage the maximum feasible energy efficiency in site design, building orientation, landscaping, and utilities/infrastructure for all development and redevelopment projects (residential, commercial, industrial, and public agency) to support GHG emissions reductions.

- **ER-13.3** Evaluate opportunities to reduce energy use and the urban heat island effect through site and building design, materials and landscaping, such as reflective roofs or pavement, vegetated roofs, pervious pavement, shade trees, and re-vegetation of paved areas.

- **ER-13.4** Support the increase of clean energy supply to existing and new development and municipal facilities through means to include, but not be limited to: onsite or other local renewable energy sources for new and existing buildings and infrastructure.

- **ER-13.5** Increase use of clean fuel and electric vehicles in the city through the support of the installation of electric vehicle infrastructure; explore opportunities to incentivize and/or facilitate installation of electric vehicle charging stations at convenient locations in Corona.

- **ER-13.6** Reduce solid waste sent to the landfills and associated community-wide GHG emissions by ensuring all properties have access to curbside solid waste, recycled materials, and green/organic waste programs; target special programs for construction debris, household hazardous waste, etc.

- **ER-13.7** Support a wide variety of transportation related measures (e.g., active transportation, increased bus and rail transit, transportation system and demand management, etc.) as articulated in the Circulation Element to reduce the number of vehicle miles traveled in Corona.

### Infrastructure and Utilities Element

#### *Energy*

- **IU-7.2** Coordinate with energy providers and the City Department of Power and Water to ensure that adequate services and facilities will meet SB 100 guidelines and the demand of existing and future developments, and be compatible with adjacent uses in Corona.

- **IU-7.3** Encourage energy providers and regulators to evaluate and maintain the safety and efficiency of utility facilities such as gas pipelines, electric lines, and transformers.

- **IU-7.4** Consider adopting a Community Choice Aggregation Ordinance or work with utility providers to offer renewable energy purchasing at a reduced cost to consumers.

- **IU-7.6** Continue to expand the supply of rooftop solar energy systems at public facilities and improve energy efficiency in City operations and capital improvements.

- **IU-7.7** Encourage the reduction of energy consumption through passive solar building orientation as well as the installation of rooftop solar energy systems and energy-efficient technologies.

- **IU-7.8** Continue to inform the community of rebates and other supportive programs for energy-efficient building improvements, appliances, and alternative energy systems.

## 5.3.4 Environmental Impacts

### 5.3.4.1 METHODOLOGY

The air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the proposed General Plan Update. The published SCAQMD Handbook and its updates on the SCAQMD website are intended to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. It provides standards, methodologies, and procedures for conducting air quality analyses in EIRs, and they were used in this analysis. SCAQMD has published additional guidance for LSTs—*Localized Significance Threshold Methodology for CEQA Evaluations* (SCAQMD 2008a)—that are intended to provide guidance in evaluating localized effects from emissions generated by a project. The following provides a summary of the assumptions utilized for the proposed General Plan Update analysis.

The City's criteria air pollutant emissions inventory includes the following sectors:

- **Transportation:** Transportation emissions forecasts were modeled using CARB's EMFAC2017, version 1.0.7, web database. Model runs were based on daily per-capita vehicle miles traveled (VMT) data

provided by Fehr & Peers (see Appendix H) and calendar year 2018 (existing) and 2040 emission rates.[9] The VMT provided includes the full trip length for land uses in the City (origin-destination approach) and a 50 percent reduction in the trip length for external-internal/internal-external trips.

- **Energy:** Emissions associated with natural gas use for residential and nonresidential land uses in the City and SOI were modeled based on data provided by SoCal Gas for years 2012 to 2016. Forecasts are adjusted for increases in population and employment in the City and SOI.

- **Off-Road Equipment:** Emission rates from CARB's OFFROAD2017, version 1.0.1, web database were used to estimate criteria air pollutant emissions from agricultural, light commercial, and construction in the City and SOI. OFFROAD2017 is a database of equipment use and associated emissions for each county compiled by CARB. Annual emissions were compiled using OFFROAD2017 for the County of Riverside for year 2018. In order to determine the percentage of emissions attributable to the City and SOI, light commercial equipment is estimated based on employment for the City of Corona as a percentage of Riverside County. Agricultural equipment emissions are based on agricultural jobs for the City as a percentage of Riverside County. Construction equipment use is estimated based on building permit data for the City of Corona and County of Riverside from data compiled by the US Census. The light commercial equipment emissions forecast is adjusted for changes in employment in the City and SOI while the agricultural equipment forecast is based on the forecasted change of farmland in the City. It is assumed that construction emissions for the forecast year would be similar to historical levels.

- **Area Sources:** Area sources are based on CalEEMod defaults for emissions generated from use of consumer products and cleaning supplies.

### Impacts of the Environment on a Project

Buildout of the proposed land use plan under the General Plan Update could result in siting sensitive uses (e.g., residential) near sources of emissions (e.g., freeways, industrial uses, etc.). Developing new sensitive land uses near sources of emissions could expose persons that inhabit these sensitive land uses to potential air quality-related impacts. However, the purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478). Thus, CEQA does not require analysis of the potential environmental effects from siting sensitive receptors near existing sources and this type of analysis is not provided below in Section 5.3.4.3, *Impact Analysis*. While it is generally not within the purview of CEQA to analyze impacts of the environment onto a project, the General Plan Update includes Policy HC-2.1, which would require that new sensitive land uses incorporate setbacks, barriers, landscaping, or other design features to minimize air quality impacts and to achieve appropriate health standards. The following polices are applicable:

[9] The Year 2040 inventory represents the projected emissions that the existing land uses would generate in the future utilizing year 2040 emission factors for on-road vehicles. To isolate the impacts related to the change in land uses proposed under the proposes project, emissions related to the proposed project will be based on the difference in emissions generated by the existing and proposed land uses under year 2040 conditions. This approach is taken because existing land uses would be subject to regulations that come into effect in the future that reduce mobile-source emissions. Thus, the level of emissions the existing land uses generate today would not be generated in perpetuity, but would be affected by these state regulations.

- HC-2.1 Require that proposals for new sensitive land uses and/or industrial and commercial uses incorporate the adequate use of setbacks, barriers, landscaping, or other design measures as necessary to minimize air quality impacts and achieve appropriate health standards.

- HC-2.7 Keep up to date on new and amended regulations issued by state and federal regulatory agencies with respect to air, water, and other pollutants and permissible exposure; revise local ordinances and development requirements as needed to reduce exposure to pollution.

### 5.3.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.3-1: The additional population growth forecast for the General Plan Update and the associated emissions would not be consistent with the assumptions of the Air Quality Management Plan. [Threshold AQ-1]**

The following describes potential air quality impacts of consistency with the AQMP from the implementation of the proposed General Plan and CAP.

The SCAQMD is directly responsible for reducing emissions from area, stationary, and mobile sources in the SoCAB to achieve the National and California AAQS and has responded to this requirement by preparing an AQMP. On March 3, 2017, the SCAQMD Governing Board adopted the 2016 AQMP, which is a regional and multiagency effort (SCAQMD, CARB, SCAG, and EPA). A consistency determination with the AQMP plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the AQMP.

The two principal criteria for conformance with an AQMP are:

1. Whether the project would exceed the assumptions in the AQMP.

2. Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timeline attainment of air quality standards.

The Southern California Association of Governments is SCAQMD's partner in the preparation of the AQMP, providing the latest economic and demographic forecasts and developing transportation measures. Regional population, housing, and employment projects developed by SCAG are based, in part, on a city's general plan land use designations. These projections form the foundation for the emissions inventory of the AQMP and are incorporated into the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) prepared by SCAG to determine priority transportation projects and vehicle miles traveled in the SCAG region. Because the AQMP strategy is based on projections from local general plans, projects that are consistent with the local general plan are considered consistent with the air quality-related

regional plan. Additionally, only large projects have the potential to substantially affect the demographic forecasts in the AQMP.

## General Plan

### *Criterion 1*

Table 5.3-9, *Comparison of Population and Employment Forecast*, compares the population and employment growth forecasted under the General Plan Update to the existing conditions and projections based on SCAG forecasts. For purposes of this analysis, the table only shows the population and employment within the City boundaries and does not include estimates for the SOI. Population and employment estimates within the SOI are excluded to in order to provide a direct comparison to SCAG projections, which only includes estimates for Corona.

**Table 5.3-9 Comparison of Population and Employment Forecast**

| Scenario | Existing Land Uses | SCAG 2040 Forecast | Proposed General Plan 2040 | Change from Existing | Increase Compared to the SCAG Forecast |
|---|---|---|---|---|---|
| Population | 165,366 | 172,300 | 184,086 | 18,720 | 11,786 |
| Employment | 70,972 | 88,400 | 84,395 | 13,423 | -4,005 |

As shown in Table 5.3-9, the General Plan Update would result in a higher population and generate lower employment for the City compared to SCAG forecasts. It should be noted that the growth projected by SCAG is based on demographic trends in the region and on the current General Plan. These demographic trends are incorporated into the RTP/SCS compiled by SCAG to determine priority transportation projects and VMT in the SCAG region. Growth projections of the General Plan Update assume full buildout of the City by the year 2040, since there is no schedule for when this development would occur. As a result, the growth projections that are based on SCAG's RTP/SCS and the associated emissions inventory in SCAQMD's AQMP do not include the additional growth forecast in the General Plan Update. Thus, the 2016 AQMP does not consider emissions associated with the General Plan Update. Once the General Plan Update is adopted and the AQMP is revised, SCAG and SCAQMD will incorporate the growth projections associated with buildout of the General Plan Update in their regional planning projections, and the General Plan Update would become consistent with the AQMP. However, since full buildout associated with the General Plan Update is not currently included in the emissions inventory for the SoCAB, it would not be consistent with the AQMP under the first criterion.

### *Criterion 2*

The SoCAB is designated nonattainment for $O_3$ and $PM_{2.5}$ under the California and National AAQS, nonattainment for lead (Los Angeles County only) under the National AAQS, and nonattainment for $PM_{10}$ under the California AAQS (CARB 2015). Because the General Plan Update involves long-term growth associated with buildout of the City and SOI, cumulative emissions generated from operation of individual development projects would exceed the SCAQMD regional and localized thresholds (see Impact 5.3-2 and

Impact 5.3-3). Consequently, emissions generated by development projects in addition to existing sources within the City and SOI are considered to cumulatively contribute to the nonattainment designations of the SoCAB. Buildout of the proposed land use plan associated with the General Plan Update 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.

### *Summary*

Buildout of the General Plan Update would exceed current population estimates for the City and therefore the emissions associated with the additional population are not included in the current regional emissions inventory for the SoCAB. Additionally, air pollutant emissions associated with buildout of the General Plan Update would cumulatively contribute to the nonattainment designations in the SoCAB. Therefore, overall, the General Plan Update would be inconsistent with the AQMP and impacts are considered potentially significant.

## Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals and does not propose any land uses or land use changes. Its implementation would contribute to reduce GHG emissions generated by existing and proposed land uses in the City and SOI.

Goal 7 of the CAP directs the City to decrease GHG emissions by reducing VMT. The following measures in the CAP support this goal:

- **Measure 7.1 – Alternative Transportation Option**s. The CAP identifies potential strategies for the City to improve alternative transportation including:
  - Working with SCAG and the community to remove barriers to alternative transportation.
  - Creating additional active transportation routes from the Corona Transit Center to surrounding residential areas.
  - Evaluating parking requirements to identify areas, such as transit districts and mixed-use developments, for shared or reduced parking requirement opportunities.
- **Measure 7.2 – Implement Bicycle Master Plan to Expand Bicycle Routes Around the City**. The CAP identifies potential improvements to the City's bicycle plan, including:
  - Expanding bicycle routes and prioritizing funding for Class 1 bicycle lanes to improve bicycle transit.

The proposed CAP measures would encourage use of alternative modes of transportation and overall reduce trips and associated VMT. Thus, implementation of the City's CAP would result in beneficial impacts to air quality. Therefore, because the proposed CAP does not propose new or different land uses in the City and

SOI, would not result in direct growth, and would result in a beneficial air quality impact, it would not interfere with implementation of the AQMP, and impacts are considered less than significant.

**Impact 5.3-2: Construction activities associated with future development that would be accommodated under the General Plan Update could generate short-term emissions in exceedance of SCAQMD'S threshold criteria. [Threshold AQ-2]**

Construction activities would temporarily increase $PM_{10}$, $PM_{2.5}$, VOC, $NO_X$, $SO_X$, and CO regional emissions within the SoCAB. The primary source of $NO_x$, CO, and $SO_x$ emissions is the operation of construction equipment. The primary sources of particulate matter ($PM_{10}$ and $PM_{2.5}$) emissions are activities that disturb the soil, such as grading and excavation, road construction, and building demolition and construction. The primary sources of VOC emissions are the application of architectural coating and off-gas emissions associated with asphalt paving. A discussion of health impacts associated with air pollutant emissions generated by construction activities is included under "Air Pollutants of Concern" in Section 5.3.1.1, *Regulatory Framework*.

## General Plan

Construction activities associated with the General Plan Update would occur over the buildout horizon of the plan, causing short-term emissions of criteria air pollutants. However, information regarding specific development projects, soil types, and the locations of receptors would be needed in order to quantify the level of impact associated with construction activity. Due to the scale of development activity associated with buildout of General Plan Update, emissions would likely exceed the SCAQMD regional significance thresholds. In accordance with the SCAQMD methodology, emissions that exceed the regional significance thresholds would cumulatively contribute to the nonattainment designations of the SoCAB. The SoCAB is designated nonattainment for $O_3$ and particulate matter ($PM_{10}$ and $PM_{2.5}$). Emissions of VOC and $NO_X$ are precursors to the formation of $O_3$. In addition, $NO_X$ is a precursor to the formation of particulate matter ($PM_{10}$ and $PM_{2.5}$). Therefore, the General Plan Update would cumulatively contribute to the nonattainment designations of the SoCAB for $O_3$ and particulate matter ($PM_{10}$ and $PM_{2.5}$).

Air quality emissions related to construction must be addressed on a project-by-project basis. For the General Plan Update, which is a broad-based policy plan, it is not possible to determine whether the scale and phasing of individual projects would exceed the SCAQMD's short-term regional or localized construction emissions thresholds. In addition to regulatory measures—e.g., SCAQMD Rule 201 for a permit to operate, Rule 403 for fugitive dust control, Rule 1113 for architectural coatings, Rule 1403 for new source review, and CARB's Airborne Toxic Control Measures—mitigation imposed at the project level may include extension of construction schedules and/or use of special equipment.

Furthermore, the General Plan Update includes Policy ER-12.13, which calls for the implementation of best practices to control for fugitive dust emissions associated with construction-related activities, and Policy HC-2.5, which requires preparation of a technical air quality study for all new development projects to assess potential impacts.

While individual projects accommodated under the General Plan Update may not exceed the SCAQMD regional significance thresholds, the likely scale and extent of construction activities associated with the General Plan Update would likely continue to exceed the relevant SCAQMD thresholds for some projects. Therefore, construction-related regional air quality impacts of developments that would be accommodated by the General Plan Update would be potentially significant.

### Climate Action Plan

The proposed CAP is a policy-document that focuses on strategies to reduce community-wide GHG emissions associated with the City. Additionally, its implementation would not result in changes to the land use plan. Thus, because there is no specific land use component associated with the proposed CAP, its implementation would not directly result in the generation of construction-related criteria air pollutant emissions. Therefore, regional construction-related air quality impacts associated with the proposed CAP would be less than significant.

**Impact 5.3-3: Implementation of the General Plan Update would generate long-term emissions in exceedance of SCAQMD's threshold criteria. [Threshold AQ-2]**

### General Plan

For the purpose of the following analysis, it is important to note that, per the requirements of CEQA, this analysis is based on a comparison of the General Plan Update's proposed land-use diagram to existing, on-the-ground land uses and not to the current General Plan land-use diagram.

It is also important to note that the General Plan Update is a regulatory document that sets up the framework for growth and development and does not directly result in development. Before development can occur, it must be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and state requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

The General Plan Update guides growth and development in the City and SOI by designating land uses in the proposed land use diagram and through implementation of its goals and policies. New development would increase air pollutant emissions in the City and contribute to the overall emissions inventory in the SoCAB. A discussion of health impacts associated with air pollutant emissions generated by operational activities is included under "Air Pollutants of Concern" in Section 5.3.1.1, *Regulatory Framework*.

#### *City and SOI Emissions Inventory*

The emissions inventory for the City and SOI under the General Plan Update is shown in Table 5.3-10, *Buildout Year 2040 City and SOI Regional Criteria Air Pollutant Emissions Inventory*. As shown in the table, implementation of the General Plan Update would result in an increase in criteria air pollutant emissions from existing conditions. This increase is based on the difference between existing land uses and land uses associated with buildout of the General Plan Update as well as an estimate of population and employment in the City and SOI in year 2040. Buildout of the General Plan Update would generate long-term emissions that

exceed the daily SCAQMD thresholds for VOC, $NO_X$, CO, $PM_{10}$, and $PM_{2.5}$. Emissions of VOC and $NO_X$ are precursors to the formation of $O_3$. In addition, $NO_X$ is a precursor to the formation of particulate matter ($PM_{10}$ and $PM_{2.5}$). Therefore, emissions of VOC and $NO_X$ that exceed the SCAQMD regional significance thresholds would contribute to the $O_3$ and particulate matter ($PM_{10}$ and $PM_{2.5}$) nonattainment designation of the SoCAB.

Table 5.3-10 Buildout Year 2040 City and SOI Regional Criteria Air Pollutant Emissions Inventory

| Sector | Criteria Air Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | $NO_X$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Existing Land Uses – Year 2040 | | | | | | |
| Transportation[1] | 96 | 1,129 | 4,239 | 23 | 491 | 204 |
| Energy | 130 | 1,143 | 720 | 7 | 90 | 90 |
| Area – Light Commercial Equipment[2] | 87 | 565 | 2,249 | 0.96 | 29 | 25 |
| Area – Construction/Agricultural[2] | 18 | 155 | 268 | <1 | 8 | 7 |
| Area – Consumer Products[3] | 3,652 | 0 | 0 | 0 | 0 | 0 |
| Existing Land Uses Total | 3,983 | 2,993 | 7,476 | 32 | 617 | 325 |
| Proposed Land Use Plan – Forecast Year 2040 | | | | | | |
| Transportation[1] | 125 | 1,474 | 5,533 | 31 | 641 | 266 |
| Energy | 166 | 1,468 | 952 | 9 | 115 | 115 |
| Area – Light Commercial Equipment[2] | 124 | 799 | 3,180 | 1 | 41 | 35 |
| Area – Construction/Agricultural[2] | 17 | 153 | 234 | <1 | 8 | 7 |
| Area – Consumer Products[3] | 4,773 | 0 | 0 | 0 | 0 | 0 |
| Proposed Land Use Plan Total | 5,205 | 3,894 | 9,899 | 41 | 804 | 423 |
| Increase in Emissions | 1,221 | 901 | 2,423 | 10 | 187 | 98 |
| SCAQMD Regional Significance Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| Significant? | Yes | Yes | Yes | No | Yes | Yes |

Note: Emissions forecasts estimated based on changes in population (residential energy, area), employment (nonresidential energy, area), or service population (transportation).

1 EMFAC2017, Version 1.0.2, based on daily VMT provided by Fehr & Peers. Transportation sector includes the full trip length for internal-internal trips and 50 percent trip length for external-internal/internal-external trips. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

2 OFFROAD2017, Version 1.0.1. Light commercial equipment emissions estimated based on employment for the City of Corona as a percentage of Riverside County. Construction emissions estimated based on housing permit data for Riverside County and the City of Corona from the US Census. Agricultural equipment emissions based on employment data and designated farmland in the City of Corona. Excludes fugitive emissions from construction sites and wood-burning fireplaces. Various industrial and commercial processes (e.g., manufacturing and dry cleaning) allowed under the land use plan of the proposed General Plan Update would require permitting and would be subject to further study pursuant to SCAQMD Regulation XIII, New Source Review. Because the nature of those emissions cannot be determined at this time and they are subject to further regulation and permitting, they are not included in the table.

3 Based on CalEEMod, Version 2016.3.2, methodology utilized to calculate VOC emissions from use of household consumer cleaning products.

Implementation of the General Plan Update policies could contribute to reducing criteria air pollutant emissions. Policy HC-2.5 would require preparation of an air quality study to analyze potential air quality impacts of a new development and if necessary, to identify reduction measures to minimize impacts. In addition, the Environmental Resources Element includes the Air Resources goals and policies, which would also contribute to controlling emissions generated in the City and SOI:

- **Goal ER-12**Improvement in air quality within the Corona Planning Area by controlling point sources, reducing vehicle trips, implementing efficient land use planning and construction practices, and energy conservation. (Policies ER-12.1 through ER-12.14)

The Air Resources policies focus on controlling emissions from point sources (Policies ER-12.1 through ER-12.4) and reducing VMT by increasing public and active transit and through land use planning (Policies ER-12.5 through ER-12.12). Furthermore, the Circulation Element also includes goals and policies that promote an increase in concepts and designs that would increase walking, bicycling, and use of public transit, in addition to transportation demand management policies, which would contribute to reduced VMT:

- **Goals CE-3** Maximize the efficiency of the circulation system through the use of transportation system management strategies. Reduce total vehicular miles traveled in Corona through the development and improvement of alternative transportation modes, the reduction in the number of trips generated, and the reduction in trip distances. (Policies CE-3.2 through CE-3.3)

- **Goal CE-4** A public transportation system that provides mobility for residents and encourages use of public transportation as an alternative to automobile travel. (Policies CE-4.1 through CE-4.10)

- **Goal CE-5** Develop and maintain convenient bikeway and pedestrian systems to satisfy both recreational desires and transportation needs using a complete streets approach to accommodate users of all modes, abilities, and needs. (Policies CE-5.1 through CE-5.10)

However, future development projects that would be accommodated by the General Plan Update could exceed the SCAQMD regional emissions thresholds. Therefore, operational air quality impacts associated with future development of the General Plan Update would be significant.

### Climate Action Plan

The proposed CAP would not result in additional changes to and would not affect the building density or intensity allowed by the proposed land use plan. However, implementation of the GHG Reduction Strategies identified in the proposed CAP would have co-benefits with regard to operation-related criteria air pollutant emissions. Energy efficiency improvements (e.g., Strategies 1.2, 2.1, and 4.1) would reduce the heating and cooling requirements for buildings and would also result in a decrease in natural gas use and associated criteria air pollutants (i.e., VOC, $NO_X$, CO, $SO_X$, $PM_{10}$, and $PM_{2.5}$). Likewise, transportation strategies that reduce VMT (e.g., Strategies 7.1 and 7.2) would result in reduction in criteria air pollutants from the transportation sector. Thus, implementation of the proposed CAP would contribute to reducing operation-phase criteria air pollutant emissions and result in beneficial air quality impacts.

**Impact 5.3-4: Operation of industrial and warehousing land uses accommodated under the General Plan Update could expose sensitive receptors to substantial toxic air contaminant concentrations. [Threshold AQ-3]**

## General Plan Update

Development and operation of new land uses accommodated under the proposed land use plan could generate new sources of TACs in the City and SOI from area/stationary sources and mobile sources.

### *Permitted Stationary Sources*

Various industrial and commercial processes (e.g., manufacturing, dry cleaning) allowed under the proposed land use plan would be expected to release TACs. Industrial land uses, such as chemical processing facilities, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities, have the potential to be substantial stationary sources that would require a permit from SCAQMD. Emissions of TACs would be controlled by SCAQMD through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under SCAQMD Rule 1401. While the General Plan Update includes policies under the Healthy Community Element to reduce exposure of sensitive receptors to pollution (e.g., Policies, HC-2.1, HC-2.4, and HC-2.5), until specific future development projects are proposed, the associated emissions cannot be determined or modeled. Therefore, implementation of the General Plan Update may result in projects that emit TACs throughout the City and SOI and result in potentially significant localized air quality impacts.

### *Nonpermitted Sources*

In addition, mobile sources of TACs are not regulated by SCAQMD. New warehousing operations permitted within the proposed areas designated Light Industrial (LI) and General Industrial (GI) could generate substantial DPM emissions from off-road equipment use and truck idling. Some warehousing and industrial facilities may also use transport refrigeration units for cold storage. New land uses in the City and SOI that are permitted under the General Plan Update that use trucks, including trucks with TRUs, could generate an increase in diesel particulate matter that would contribute to cancer and noncancer health risk in the SoCAB. These types of facilities could also generate particulate matter ($PM_{10}$ and $PM_{2.5}$) that could cause an exceedance or contribute to the continuing exceedance of the federal and state AAQS. These new land uses could be near existing sensitive receptors. As shown in Figure 3-5, *Land Use Plan: City of Corona*, and Figure 3-6, *Land Use Plan: Sphere of Influence Areas*, the areas designated LI and GI in the City and SOI are in close proximity or adjacent to areas designated for residential use. In addition, trucks would travel on regional transportation routes through the SoCAB, contributing to near-roadway diesel particulate matter concentrations.

Implementation of Policy HC-2.2, which calls for designation and maintenance of truck routes that would balance the needs of industrial and commercial uses and avoiding sensitive areas (e.g., residences and schools) would contribute in minimizing exposure of sensitive receptors to substantial concentrations of TACs. Policies HC-2.1 (implementation of setbacks, barriers, and other design features to reduce exposure) and HC-2.5 (requirement to prepare air quality study and identify measures to reduce impact as necessary) would also

contribute to minimizing exposure of sensitive receptors to substantial TAC concentrations. However, until specific future development projects are proposed, the associated emissions and concentrations cannot be determined or modeled. Therefore, health risk impacts from development of industrial and commercial land uses are considered potentially significant.

### Climate Action Plan

Implementation of the proposed CAP would not result in additional changes to the land use plan of the General Plan Update. Therefore, the localized operation-related health risk impacts associated with the proposed CAP would be less than significant.

**Impact 5.3-5: Development and operation of land uses accommodated by the General Plan Update could generate emissions that exceed the LSTs and expose sensitive receptors to substantial criteria air pollutant concentrations. [Threshold AQ-3]**

### General Plan Update

Operation of new land uses consistent with the land use plan of the proposed General Plan Update would generate new sources of criteria air pollutant in the City and SOI from area/stationary sources and mobile sources.

#### *Localized Significance Thresholds*

Implementation of the General Plan Update could expose sensitive receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevating those levels. Unlike mass of emissions shown in Table 5.3-10, described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or $\mu g/m^3$) and can be correlated to potential health effects. LSTs are the amount of project-related emissions at which localized concentrations (ppm or $\mu g/m^3$) would exceed the ambient air quality standards for criteria air pollutants for which the SoCAB is designated a nonattainment area.

#### ***Operation LSTs***

The types of land uses that could generate substantial amounts of stationary source emissions include industrial land uses, which is an accommodated land use under the General Plan Update (see Figure 3-5, *Land Use Plan: City of Corona*, and Figure 3-6, *Land Use Plan: Sphere of Influence Areas*). Implementation of the General Plan Update policies could contribute to reducing criteria air pollutant emissions. Policy HC-2.5 would require preparation of an air quality study to analyze potential air quality impacts of a new development and if necessary, to identify reduction measures to minimize impacts. In addition, the Environmental Resources Element includes the Air Resources policies (Policies ER-12.1 through ER-12.14) which would also contribute to controlling emissions generated in the City and SOI. The Air Resources policies focus on controlling emissions from point sources (Policies ER-12.1 through ER-12.4) and reducing VMT by increasing public and active transit and through land use planning (Policies ER-12.5 through ER-12.14). Furthermore, the Circulation Element also includes policies that promote an increase in concepts and designs that would increase walking, bicycling, and use of public transit in addition to transportation demand

management policies, which would contribute to reduced VMT (e.g., Policies CE-3.2 through CE-3.3, Policies CE-4.1 through CE-4.10, and CE-5.1 through CE-5.10).

The aforementioned policies of the General Plan Update would contribute to minimizing localized operation-related emissions from individual land use development projects accommodated in the proposed land use plan to the extent possible. However, per the LST methodology, information regarding specific development projects and the locations of receptors would be needed in order to quantify the levels of localized operation and construction-related impacts associated with future development projects. Thus, because the proposed General Plan Update is a broad-based policy plan and does not itself propose specific development projects, it is not possible to calculate individual project-related operation emissions at this time. Overall, because of the likely scale of future development and the inclusion of industrial uses that would be accommodated by the General Plan Update, some development projects could likely exceed the LSTs. Therefore, localized operation-related air quality impacts associated with implementation of the General Plan Update are considered potentially significant impacts.

#### *Construction LSTs*

Buildout of the General Plan Update would occur over approximately 21 years or longer via several smaller projects, each with its own construction time frame and equipment. Because an LST analysis can only be conducted at a project-level, quantification of LSTs is not applicable for the program-level environmental analysis of the General Plan Update. Because potential development and redevelopment could occur close to existing sensitive receptors, future development projects that would be accommodated by the General Plan Update have the potential to expose sensitive receptors to substantial pollutant concentrations. Construction equipment exhaust combined with fugitive particulate matter emissions has the potential to expose sensitive receptors to substantial concentrations of criteria air pollutant emissions and result in a significant impact.

### *CO Hotspots*

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hotspot analysis conducted for the attainment by SCAQMD did not predict a violation of CO standards at the busiest intersections in Los Angeles during the peak morning and afternoon periods.[10] As identified in SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection (SCAQMD 1992; SCAQMD 2003).

Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017). Implementation

[10] The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

of the General Plan Update under horizon year conditions would result in a maximum net increase of 2,460 peak hour trips (PM peak) (see Appendices D and M of this DEIR). This net increase would be below the screening criteria. Thus, implementation of the General Plan Update would not produce the volume of traffic required to generate a CO hotspot, and CO hotspots impacts would be less than significant.

### Climate Action Plan

#### *Localized Significance Thresholds*

The proposed CAP is a policy-document that focuses on strategies to reduce community-wide GHG emissions. Its implementation would not result in changes to the land use plan. Because there is no specific land use component associated with the proposed CAP, its implementation would not directly result in the generation of construction-related criteria air pollutant or TAC emissions. In addition, as stated under Impact 5.3-3, implementation of the CAP could result in beneficial long-term air quality impacts from the increase in energy efficiency, usage of clean energy, and reduction in VMT. Therefore, localized construction- and operation-related air quality impacts associated with the proposed CAP would be less than significant.

#### *CO Hotspots*

The proposed CAP is a policy-document that focuses on strategies to reduce community-wide GHG emissions associated with the City and would not result in changes to the Land Use plan. Because there is no specific land use component associated with the proposed CAP, its implementation would not directly result in the generation of vehicle trips and the potential to create CO hotspots. In addition, as discussed in Impact 5.3-1, Goal 7 and its measures would contribute to reducing vehicle trips and VMT by supporting and encouraging public and active transit. A reduction in vehicle trips would contribute to further minimizing the potential creation of CO hotpots. Therefore, overall, the proposed CAP could result in a beneficial impact through the potential reduction in vehicle trips, and CO hotspot impacts would be less than significant.

**Impact 5.3-6: Industrial land uses accommodated under the General Plan Update could create other emissions, such as those leading to objectionable odors, that would adversely affect a substantial number of people. [Threshold AQ-4]**

### General Plan

Growth within the City and SOI under the General Plan Update could generate new sources of odors. Nuisance odors from land uses in the SoCAB are regulated under SCAQMD Rule 402, Nuisance, which states:

> A person shall not discharge from any source whatsoever such quantifies of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

### *Industrial and SCAQMD Permitted Land Uses*

Industrial land uses have the potential to generate objectionable odors. Examples of industrial projects are wastewater treatment plants, compost facilities, landfills, solid-waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch manufacturing plants, chemical manufacturing, and food manufacturing facilities.

Areas where the aforementioned types of uses could be developed under the General Plan Update would be generally limited to the areas designated LI and GI, which are generally in the northern areas of the City and SOI along the State Route 91 (SR-91) corridor and along the eastern side of Interstate 15 (I-15) in the SOI (see Figure 3-5 and 3-6). While industrial land uses associated with the General Plan Update would be required to comply with SCAQMD Rule 402, additional measures may be necessary to prevent an odor nuisance. Therefore, industrial land uses associated with the General Plan may generate potentially significant odor impacts to a substantial number of people.

### *Residential and Other Land Uses*

Residential and other nonresidential, nonindustrial land uses that would be accommodated by the General Plan Update could result in the generation of odors such as exhaust from landscaping equipment and from cooking. However, unlike industrial land uses, these are not considered potential generators of odor that could affect a substantial number of people. Furthermore, nuisance odors are regulated under SCAQMD Rule 402, which requires abatement of any nuisance generating a verified odor complaint. Therefore, impacts from potential odors generated from residential and other nonresidential land uses associated with the General Plan Update are considered less than significant.

### *Construction*

During construction activities of development projects that would be accommodated by the General Plan Update, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. However, any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment in use. By the time such emissions reached any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Furthermore, short-term construction-related odors are expected to cease upon the drying or hardening of odor-producing materials. Therefore, impacts associated with construction-generated odors are considered less than significant.

## Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City and SOI. The proposed CAP would not affect the building density or intensity allowed by the proposed land use plan and would not directly result in the generation of odors or other emissions. Therefore, odor impacts associated with implementation of the City's CAP would be less than significant.

## 5.3.5 Existing Regulations and Standard Conditions

### State

- Clean Car Standards – Pavley (AB 1493)
- California Advanced Clean Cars CARB (Title 13 CCR)
- Low-Emission Vehicle Program – LEV III (Title 13 CCR)
- Statewide Retail Provider Emissions Performance Standards (SB 1368).
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

### Regional

- SCAQMD Rule 201: Permit to Construct
- SCAQMD Rule 402: Nuisance Odors
- SCAQMD Rule 403: Fugitive Dust
- SCAQMD Rule 1113: Architectural Coatings
- SCAQMD Rule 1186: Street Sweeping
- SCAQMD Rule 1403: Asbestos Emissions from Demolition/Renovation Activities

## 5.3.6 Level of Significance Before Mitigation

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.3-1** The additional population growth forecasted for the General Plan Update and the associated emissions would not be consistent with the assumptions of the Air Quality Management Plan.

- **Impact 5.3-2** Construction activities associated with future development that would be accommodated under the General Plan Update could generate short-term emissions in exceedance of SCAQMD'S threshold criteria.

- **Impact 5.3-3** Implementation of the General Plan Update would generate long-term emissions in exceedance of SCAQMD's threshold criteria.

- **Impact 5.3-4** Operation of industrial and warehousing land uses accommodated under the General Plan Update could expose sensitive receptors to substantial toxic air contaminant concentrations.

- **Impact 5.3-5** Development and operation of land uses accommodated by the General Plan Technical Update could generate emissions that exceed the LSTs and expose sensitive receptors to substantial criteria air pollutant concentrations.

- **Impact 5.3-6** Industrial land uses accommodated under the General Plan Update could create other emissions, such as those leading to objectionable odors, that would adversely affect a substantial number of people.

## 5.3.7 Mitigation Measures

### Impact 5.3-1

When incorporated into future development projects for operation and construction phases, the mitigation measures outlined for Impacts 5.3-2 and 5.3-3, described below, would contribute to reduced criteria air pollutant emissions associated with buildout of the General Plan Update. Additionally, goals and policies included in the General Plan Update would promote increased capacity for alternative transportation modes, implementation of transportation demand management strategies, and energy efficiency. However, no further mitigation measures are available that would reduce impacts to below SCAQMD significance thresholds due to the magnitude of growth and associated emissions that would be generated by the buildout of the General Plan Update.

### Impact 5.3-2

AQ-1 Prior to discretionary approval by the City of Corona for development projects subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects), project applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the City of Corona Planning Division for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology for assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the SCAQMD-adopted thresholds of significance, the City of Corona shall require that applicants for new development projects incorporate mitigation measures 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's Planning Division. Mitigation measures to reduce construction-related emissions could include, but are not limited to:

- Requiring fugitive-dust control measures that exceed SCAQMD's Rule 403, such as:
  - Use of nontoxic soil stabilizers to reduce wind erosion.
  - Applying water every four hours to active soil-disturbing activities.
  - Tarping and/or maintaining a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials.

- Using construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower.
- Ensuring that construction equipment is properly serviced and maintained to the manufacturer's standards.
- Limiting nonessential idling of construction equipment to no more than five consecutive minutes.
- Limiting onsite vehicle travel speeds on unpaved roads to 15 miles per hour.
- Installing wheel washers for all exiting trucks or wash off all trucks and equipment leaving the project area.
- Using 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 at http://www.aqmd.gov/docs/default-source/planning/architectural-coatings/super-compliant-manf-list.pdf?sfvrsn=71.

### Impact 5.3-3

AQ-2 Prior to discretionary approval by the City of Corona for development projects subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects), project applicants shall prepare and submit a technical assessment evaluating potential project operation phase-related air quality impacts to the City of Corona Planning Division for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the SCAQMD-adopted thresholds of significance, the City of Corona Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following:

- For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plug-in of the anticipated number of refrigerated trailers to reduce idling time and emissions.
- Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in appropriate applications to optimize renewable energy generation systems and avoid peak energy use.
- Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for

loading/unloading in accordance with California Air Resources Board Rule 2845 (13 CCR Chapter 10 § 2485).

- Provide changing/shower facilities as specified in Section A5.106.4.3 of the CALGreen Code (Nonresidential Voluntary Measures).
- Provide bicycle parking facilities per Section A4.106.9 (Residential Voluntary Measures) of the CALGreen Code.
- Provide preferential parking spaces for low-emitting, fuel-efficient, and carpool/van vehicles per Section A5.106.5.1 of the CALGreen Code (Nonresidential Voluntary Measures).
- Provide facilities to support electric charging stations per Section A5.106.5.3 (Nonresidential Voluntary Measures) and Section A5.106.8.2 (Residential Voluntary Measures) of the CALGreen Code.
- Applicant-provided appliances shall be Energy Star-certified appliances or appliances of equivalent energy efficiency (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star-certified or equivalent appliances shall be verified by Building & Safety during plan check.
- Applicants for future development projects along existing and planned transit routes shall coordinate with the City of Corona and Riverside Transit to ensure that bus pad and shelter improvements are incorporated, as appropriate.

### Impact 5.3-4

AQ-3 Prior to discretionary approval by the City of Corona, project applicants for new industrial or warehousing development projects that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, or nursing homes), as measured from the property line of the project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City of Corona Planning Division for review and approval. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment and the South Coast Air Quality Management District. If the HRA shows that the incremental cancer risk and/or noncancer hazard index exceed the respective thresholds, as established by the SCAQMD at the time a project is considered, the project applicant will be required to identify and demonstrate that best available control technologies for toxics (T-BACTs), including appropriate enforcement mechanisms, are capable of reducing potential cancer and noncancer risks to an acceptable level. T-BACTs may include, but are not limited to, restricting idling onsite or electrifying warehousing docks to reduce diesel particulate matter, or requiring use of newer equipment and/or vehicles. T-BACTs identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan.

### Impact 5.3-5

Mitigation Measures AQ-1 and AQ-2 would also be applicable in reducing construction and operation-related LST impacts.

### Impact 5.3-6

AQ-4 Prior to discretionary approval by the City of Corona, if it is determined that a development project has the potential to emit nuisance odors beyond the property line, an odor management plan shall be prepared by the project applicant and submitted to the City of Corona Planning Division for review and approval. Facilities that have the potential to generate nuisance odors include, but are not limited to:

- Wastewater treatment plants
- Composting, green waste, or recycling facilities
- Fiberglass manufacturing facilities
- Painting/coating operations
- Large-capacity coffee roasters
- Food-processing facilities

The odor management plan shall demonstrate compliance with the South Coast Air Quality Management District's Rule 402 for nuisance odors. The Odor Management Plan shall identify the best available control technologies for toxics (T-BACTs) that will be utilized to reduce potential odors to acceptable levels, including appropriate enforcement mechanisms. T-BACTs may include but are not limited to scrubbers (i.e., air pollution control devices) at the industrial facility. T-BACTs identified in the odor management plan shall be identified as mitigation measures in the environmental document prepared for the development project and/or incorporated into the project's site plan.

## 5.3.8 Level of Significance After Mitigation

### Impact 5.3-1

The General Plan Update would be inconsistent with the SCAQMD AQMP because buildout under the plan would exceed the population estimates assumed for the AQMP and would cumulatively contribute to the nonattainment designations of the SoCAB. Incorporation of Mitigation Measures AQ-2 into future development projects for the operation phase described in Impact 5.3-3, below, would contribute to reduced criteria air pollutant emissions associated with buildout of the General Plan Update. Additionally, goals and policies included in the General Plan Update would promote increased capacity for alternative transportation modes and implementation of transportation demand management strategies. However, due to the magnitude and scale of the land uses that would be developed, no mitigation measures are available that would reduce operation and construction impacts below SCAQMD thresholds. In addition, the population and employment assumptions of the AQMP would continue to be exceeded until the AQMP is revised and

incorporates the projections of the General Plan Update. Therefore, in regard to the General Plan Update, Impact 5.3-1 would remain ***significant and unavoidable***.

### Impact 5.3-2

Buildout of the General Plan Update would occur over a period of approximately 20 to 21 years or longer. Construction activities associated with buildout of the General Plan Update could generate short-term emissions that exceed the SCAQMD'S significance thresholds during this time and cumulatively contribute to the nonattainment designations of the SoCAB. Implementation of Mitigation Measure AQ-1 would reduce criteria air pollutant emissions from construction-related activities to the extent feasible. However, construction time frames and equipment for site-specific development projects are not available at this time and there is a potential for multiple development projects to be constructed at one time, resulting in significant construction-related emissions. Therefore, despite adherence to Mitigation Measure AQ-1, Impact 5.3-2 as it pertains to the General Plan Update would remain ***significant and unavoidable***.

### Impact 5.3-3

Buildout in accordance with the General Plan Update would generate long-term emissions that would exceed SCAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SoCAB. Mitigation Measure AQ-2, in addition to the goals and policies of the General Plan Update, would reduce air pollutant emissions to the extent feasible. The measures and policies covering topics such as expansion of the pedestrian and bicycle networks, promotion of public and active transit, and support to increase building energy efficiency and energy conservation would also reduce criteria air pollutants within the City and SOI. Further, as shown in Table 5.3-11, *Net Change in Regional Emission from Existing Baseline Year 2018*, compared to existing baseline year conditions, emissions of $NO_X$, CO, and $SO_X$ are projected to decrease from current levels despite growth associated with the General Plan Update.

**Table 5.3-11 Net Change in Regional Emissions from Existing Baseline Year 2018**

| Sector | Criteria Air Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | $NO_X$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Existing Land Uses – Existing Baseline Year 2018 | | | | | | |
| Transportation[1] | 422 | 4,261 | 11,274 | 37 | 558 | 266 |
| Energy (natural gas use) | 130 | 1,143 | 720 | 7 | 90 | 90 |
| Area – Light Commercial Equipment[2] | 87 | 565 | 2,249 | 1 | 29 | 25 |
| Area – Construction/Agriculture[2] | 18 | 155 | 268 | <1 | 8 | 7 |
| Area – Consumer Products[3] | 3,652 | 0 | 0 | 0 | 0 | 0 |
| Total | 4,309 | 6,125 | 14,511 | 45 | 684 | 388 |
| Proposed Land Use Plan – Forecast Year 2040 | | | | | | |
| Transportation[1] | 125 | 1,474 | 5,533 | 31 | 641 | 266 |
| Energy | 166 | 1,468 | 952 | 9 | 115 | 115 |
| Area – Light Commercial Equipment[2] | 124 | 799 | 3,180 | 1 | 41 | 35 |
| Area – Construction/Agricultural[2] | 17 | 153 | 234 | <1 | 8 | 7 |
| Area – Consumer Products[3] | 4,773 | 0 | 0 | 0 | 0 | 0 |

Table 5.3-11 Net Change in Regional Emissions from Existing Baseline Year 2018

| Sector | Criteria Air Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | $NO_X$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Proposed Land Use Plan Total | 5,205 | 3,894 | 9,899 | 41 | 804 | 423 |
| Increase in Emissions | 895 | -2,230 | -4,612 | -4 | 120 | 35 |
| SCAQMD Regional Significance Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| Significant? | Yes | No | No | No | No | No |

Note: Emissions forecasts estimated based on changes in population (residential energy, area), employment (nonresidential energy, area), or service population (transportation).

[1] EMFAC2017, Version 1.0.2, based on daily VMT provided by Fehr & Peers. Transportation sector includes the full trip length for internal-internal trips and 50 percent trip length for external-internal/internal-external trips. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

[2] OFFROAD2017, Version 1.0.1. Light commercial equipment emissions estimated based on employment for the City of Corona as a percentage of Riverside County. Construction emissions estimated based on housing permit data for Riverside County and the City of Corona from the US Census. Agricultural equipment emissions based on employment data and designated farmland in the City of Corona. Excludes fugitive emissions from construction sites and wood-burning fireplaces. Various industrial and commercial processes (e.g., manufacturing and dry cleaning) allowed under the land use plan of the proposed General Plan Update would require permitting and would be subject to further study pursuant to SCAQMD Regulation XIII, New Source Review. Because the nature of those emissions cannot be determined at this time and they are subject to further regulation and permitting, they are not included in the table.

[3] Based on CalEEMod, Version 2016.3.2, methodology utilized to calculate VOC emissions from use of household consumer cleaning products.

However, Impact 5.3-3 would remain ***significant and unavoidable*** due to the magnitude of the overall land use development associated with the General Plan Update. Contributing to the nonattainment status would also contribute to elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants.

It is speculative for this broad-based General Plan Update to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions, or how many additional individuals in the air basin would be affected by the health effects cited above. SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SoCAB and at the present time, it has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health in order to address the issue raised in the *Friant Ranch* case.

Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National AAQS and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. To achieve the health-based standards established by the EPA, the air districts prepare air quality management plans that detail regional programs to attain the AAQS. However, because cumulative development within the City and SOI would exceed the regional significance thresholds, the proposed project could contribute to an increase in health effects in the basin until the attainment standards are met in the SoCAB.

### Impact 5.3-4

Buildout of the General Plan Update could expose sensitive receptors to substantial concentrations of toxic air contaminants. Buildout could result in new sources of criteria air pollutant emissions and/or TACs near existing or planned sensitive receptors. Review of development projects by SCAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gasoline dispensing facilities) would ensure that health risks are minimized. Additionally, Mitigation Measure AQ-3 would ensure mobile sources of TACs not covered under SCAQMD permits are considered during subsequent project-level environmental review by the City of Corona. Individual development projects would be required to achieve the incremental risk thresholds established by SCAQMD, and TACs would be less than significant.

However, implementation of the General Plan Update would generate TACs that could contribute to elevated levels in the air basin. While individual projects would achieve the project-level risk threshold of 10 per million, they would nonetheless contribute to the higher levels of risk in the SoCAB. Therefore, the General Plan Update's cumulative contribution to health risk is ***significant and unavoidable***.

### Impact 5.3-5

Mitigation Measures AQ-1 and AQ-2 (applied for Impacts 5.3-2 and 5.3-3, respectively) would reduce the regional construction and operation emissions associated with buildout of the General Plan Update and therefore also result in a reduction of localized construction- and operation-related criteria air pollutant emissions to the extent feasible. However, because existing sensitive receptors may be close to project-related construction activities and large emitters of onsite operation-related criteria air pollutant emissions, construction and operation emissions generated by individual development projects have the potential to exceed SCAQMD's LSTs. Impact 5.3-5, in regard to the General Plan Update, would remain ***significant and unavoidable***.

### Impact 5.3-6

Mitigation Measure AQ-4 would ensure that odor impacts are minimized and facilities would comply with SCAQMD Rule 402. Therefore, Impact 5.3-6 would be less than significant.

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# 5.4 BIOLOGICAL RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Corona General Plan Update to impact biological resources in the City of Corona and its sphere of influence (SOI). Cumulative impacts related to biological resources would be within the City and SOI boundaries, but would consider regional habitat loss in the southern California region based on the range of the protected species. The study area includes the following eight U.S. Geological Survey (USGS) quadrangles, which encompass the City of Corona and its SOI: Prado Dam, Corona North, Riverside West, Black Star Canyon, Corona South, Lake Mathews, Alberhill, and Santiago Peak. The analysis in this section is based in part on:

- *City of Corona General Plan Update: Biological Resources Technical Report,* SWCA Environmental Consultants, January 2018.

A complete copy of this report is included as Appendix E to this DEIR.

## 5.4.1 Environmental Setting

### 5.4.1.1 REGULATORY FRAMEWORK

A complex network of federal, state, and local regulations governs the biological resources of California. This section is an overview of the federal, state, and local regulations and policies that may be pertinent to the update to the Corona General Plan.

#### Federal Laws

##### *Federal Endangered Species Act*

The federal Endangered Species Act (FESA) protects endangered and threatened species (federally listed species). The FESA operates in conjunction with the National Environmental Policy Act to help protect the species themselves and the ecosystems that endangered and threatened species depend on. Under the FESA, a species listed as federally endangered is one facing extinction throughout all or a significant portion of its geographic range. A species listed as threatened is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Section 9 of the FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC [United States Code] § 1532[19]). "Harm" is defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR [Code of Federal Regulations] § 17.3). "Harassment" is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR § 17.3). Actions that result in take can result in civil or criminal penalties.

The U.S. Fish and Wildlife Service (USFWS) is authorized under the FESA to issue permits under Sections 7 and 10 of that act. Section 7 mandates that all federal agencies consult with the USFWS for terrestrial species

and/or National Marine Fisheries Service for marine species to ensure that federal agency actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. Any anticipated adverse effects require preparation of a biological assessment to determine potential effects of a proposed project on listed species and critical habitat. "Critical habitat" is defined in the FESA as specific geographic areas that contain features essential to the conservation of an endangered or threatened species. If a project adversely affects a listed species or its habitat, the USFWS or National Marine Fisheries Service prepares a "biological opinion." The biological opinion may recommend alternatives to the project to avoid jeopardizing or adversely modifying habitat, including take limits. Critical habitat requirements do not apply to activities on private land that do not involve a federal nexus.

Section 10 of the FESA includes provisions to authorize take that is incidental to, but not the purpose of, activities that are otherwise lawful. Under Section 10(a)(1)(B), the USFWS may issue incidental take permits for take of FESA-listed species if the take is incidental and does not jeopardize the survival and recovery of the species.

### *Clean Water Act, Section 404*

The Federal Water Pollution Control Act, known as the Clean Water Act (33 USC §§ 1251 et seq.), is the principal federal statute for water quality protection. The Clean Water Act (CWA) requires each state to adopt water quality standards and to submit those standards for approval by the U.S. Environmental Protection Agency (EPA). For point source discharges to surface water, the CWA authorizes the EPA and/or approved states to administer the National Pollutant Discharge Elimination System program. CWA section 303(d) requires states to list surface waters not attaining (or not expected to attain) water quality standards after the application of technology-based effluent limits. Typically, states must prepare and implement a total maximum daily load for all waters on the CWA section 303(d) list of impaired waters.

### *Migratory Bird Treaty Act*

The federal Migratory Bird Treaty Act (MBTA) of 1918 prohibits any person, unless permitted by regulations, to "…pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatsoever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention … for the protection of migratory birds ... or any part, nest, or egg of any such bird" (16 USC § 703). The list of migratory birds includes nearly all bird species native to the United States. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all nonnative species. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. Thus, it is illegal under MBTA to directly kill, or destroy a nest of nearly any native bird species, not just endangered species. Activities that result in removal or destruction of an active nest (a nest with eggs or young being attended by one or more adults) would violate the MBTA. Removal of unoccupied nests and bird mortality resulting indirectly from disturbance activities are not considered violations of the MBTA.

### *Bald and Golden Eagle Protection Act*

The Bald and Golden Eagle Protection Act (16 USC §§ 668–668c) prohibits anyone from "taking" bald eagles (*Haliaeetus leucocephalus*), including their parts, nests, or eggs without a permit issued by the Secretary of the Interior. In 1962, Congress amended the act to cover golden eagles (*Aquila chrysaetos*). The act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." The 1962 amendments included a specific exemption for possession of eagles for religious purposes of Native American tribes; however, an Indian Religious Permit is required.

On November 10, 2009, the USFWS implemented new rules under the existing Bald and Golden Eagle Protection Act, requiring USFWS permits for all activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity. Under USFWS rules (16 USC § 22.3; 72 Federal Register 31,132, June 5, 2007), "disturb" means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment.

## State Laws

### *California Endangered Species Act*

According to the biological report, the California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA), which states that "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved." The CESA, prohibits the "taking" of listed species except as otherwise provided in state law. Section 86 of the Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Under certain circumstances, the CESA applies these take prohibitions to candidates for listing. State lead agencies (defined in CEQA § 21067) are required to consult with the CDFW to ensure that any action or project is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat. Additionally, the CDFW encourages informal consultation on any proposed project that may impact a candidate species. The CESA requires CDFW to maintain a list of threatened and endangered species. The CDFW also maintains a list of candidates for listing and of species of special concern (or watch list species).

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy, a threatened species as one present in such small numbers

throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management, and a rare species as one present in such small numbers throughout its range that it may become endangered if its present environment worsens. Rare species apply primarily to California native plants.

#### *Fully Protected Species Act*

The California Fish and Game Code provides protection from take for a variety of species, referred to as fully protected species. Except for take related to scientific research, all take of fully protected species is prohibited. Section 5050 lists protected amphibians and reptiles, and Section 3515 prohibits take of fully protected fish species. Eggs and nests of fully protected birds are under Section 3511. Migratory nongame birds are protected under Section 3800, and mammals are protected under Section 4700.

#### *Nesting Birds and Raptors*

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 specifically provides protection for all birds of prey, including their eggs and nests.

#### *Migratory Bird Protection*

Take or possession any migratory nongame bird, as designated in the MBTA, is prohibited by Section 3513 of the Fish and Game Code.

#### *Nesting Birds and Raptors*

Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 specifically provides protection for all birds of prey, including their eggs and nests.

#### *Streambed Alteration Permits*

California Fish and Game Code Sections 1601 to 1607 prohibit alteration of any lake or streambed under CDFW jurisdiction, including intermittent and seasonal channels and many artificial channels, without execution of a Lake and Streambed Alteration Agreement through CDFW. This applies to any channel modifications that would be required to meet drainage, transportation, or flood control objectives.

### Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code §§ 1900–1913) directed CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protected endangered and rare plants from take. The NPPA thus includes measures to preserve, protect, and enhance rare and endangered native plants.

CESA has largely superseded NPPA for all plants designated endangered by the NPPA. The NPPA nevertheless provides limitations on take of rare and endangered species: "...no person will import into this state, or take, possess, or sell within this state" any rare or endangered native plant, except in compliance with provisions of the CESA (14 CCR § 783.1). Individual land owners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

***Inventory of Rare and Endangered Plants***

Operating under a Memorandum of Understanding with the CDFW, the California Native Plant Society (CNPS) maintains an inventory of plants believed or known to be rare in California. This list includes species not protected under federal or state endangered species legislation. Plants in the inventory are assigned a "rare plant rank." The major categories of plants under the CNPS scheme are:

- List 1A, Plants presumed extinct.
- List 1B, Plants rare, threatened, or endangered in California and elsewhere.
- List 2, Plants rare, threatened, or endangered in California, but more numerous elsewhere.
- List 3, A review list of plants for which the CNPS requires more information.
- List 4, A watch list of plants of limited distribution.

Plants on CNPS List 1 or 2 generally meet the CEQA Section 15380 definitions of rare or endangered. These plants also meet the definitions of CESA and are eligible for state listing.

### *California Desert Native Plants Act*

The California Desert Native Plants Act protects unlisted California desert native plants from unlawful harvesting on public and private lands in the counties of Riverside, San Bernardino, Imperial, Inyo, Kern, Los Angeles, Mono, and San Diego (California Food and Agriculture Code, §§ 80001–80006, Division 23). A wide range of desert plants are protected under this act, including all species in the agave and cactus families. Harvest, transport, sale, or possession of specific native desert plants is prohibited without a valid permit or wood receipt and the required tags and seals. Plants listed rare, endangered, or threatened under federal or state law or regulations are excluded from this provision. The act was taken into consideration in this evaluation due to the presence of both Joshua trees (agave family) and cacti in the City and SOI.

### *California Porter-Cologne Water Quality Act*

The State Water Resources Control Board (State Water Board) and nine Regional Water Quality Control Boards implement many of the Clean Water Act's provisions. The Porter-Cologne Water Quality Control Act is the principal law governing water quality regulation in California, establishing a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and groundwater and to both point and nonpoint sources of pollution.

The Porter-Cologne Act implements many provisions of the Clean Water Act. Section 401 of the Clean Water Act gives the State Water Board the authority to review any proposed federally permitted or federally licensed activity that may impact water quality and to certify, condition, or deny the activity if it does not comply with state water quality standards. If the State Water Board imposes a condition on its certification, those conditions must be included in the federal permit or license.

The Regional Water Quality Control Board (RWQCB) regulates discharge of waste in any region that could affect the Waters of the State under the Porter-Cologne Act. Under the act, a report of waste discharge must be submitted prior to discharging or proposing to discharge waste in any region that could affect the quality of the Waters of the State (California Water Code § 13260). Waste discharge requirements or a waiver of those requirements will be issued by the RWQCB. Waters of the State are defined as any surface water or groundwater, including saline waters, that are within the boundaries of the state (Public Resource Code § 71200). This differs from the CWA definition of waters of the United States by its inclusion of groundwater and waters outside the ordinary high-water mark in its jurisdiction.

## Regional Laws

### *Riverside County*

The Riverside County Environmental Programs Department is responsible for overseeing implementation programs for three regional habitat conservation plans and ensuring consistency with the County's existing land development process. Department staff work closely with local, state, and federal entities to develop and implement regional environmental procedures. They also review and approve habitat assessments, focused surveys, and biological reports for environmental impact reports.

### *Western Riverside Multi-Species Habitat Conservation Plan*

The Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional plan that addresses biological and ecological diversity by conserving species and associated habitats, while allowing approval of development in western Riverside County. It is administered by the Western Riverside County Regional Conservation Authority.

The MSHCP functions as a habitat conservation plan (HCP) pursuant to Section 10(a)(1)(B) of the FESA and as a natural community conservation plan pursuant to California's Natural Communities Conservation Planning Act. The MSHCP provides a framework for the USFWS and CDFW to grant take authorization (i.e., incidental take permits) for species covered by the MSHCP that are FESA and/or CESA listed as threatened or endangered. Take of these species without a permit would be unlawful. The MSHCP covers 146 species, not all of which are FESA or CESA listed. However, mitigation for impacts to both listed and unlisted species may be required pursuant to CEQA or other regulatory processes, and the MSHCP's conservation area provides an avenue for this mitigation. Furthermore, if any of the unlisted covered species are subsequently listed, take authorization may be granted through the MSHCP framework.

The MSHCP was approved and permits issued in 2004 by the USFWS and the CDFW. The plan area encompasses approximately 1.26 million acres (approximately 1,967 square miles) in western Riverside

County and addresses 146 sensitive plant and animal species and the vegetation communities on which they depend. Fourteen of these animal species and eleven plant species are designated by the USFWS as listed under FESA. Several of these species also have federally designated critical habitat in the MSHCP jurisdiction. The MSHCP encompasses the City of Corona along with many other city, county, and state entities. It should be noted that the listing status of plants and animals may change over time.

The MSHCP originally set a target conservation area of 500,000 acres for western Riverside County to consist of: (1) conservation of existing publicly owned lands; (2) voluntary acquisition of privately held lands by the cities, the county, or other involved agencies; (3) voluntary acquisition of privately held lands by state and/or federal agencies; and (4) contributions from public and private development. The implementing agreement for the MSHCP between the City of Corona and other appropriate implementing agencies (permittees) outlined a strategy for assembling the 500,000-acre MSHCP Conservation Area. Local permittees would be responsible for contributing approximately 97,000 acres of additional reserve lands through the development review process. If it is determined that all or a portion of a property is needed for inclusion as additional reserve lands, various incentives may be available to the property owner in lieu of or in addition to monetary compensation in exchange for conveyance of property interest such as development rights.

Approval of the MSHCP and execution of the implementing agreement by the USFWS and CDFW allow the agencies to issue Take Authorizations, including the City of Corona. Implementation of land use decisions consistent with the MSHCP can occur without project-by-project review and permitting by USFWS and CDFW.

### *MSHCP Area Plan: Temescal Canyon Area Plan*

The MSHCP was divided into 14 area plans for planning rather than biological purposes, with specific conservation goals defined for each. The City of Corona and its SOI are almost entirely within the Temescal Canyon Area Plan; the Temescal Canyon Area Plan is divided into five subunits which are described below. Part of the SOI extends into the area covered by the Lake Matthews/Woodcrest Area Plan. This approximately 3.2-acre area of the SOI is an approximately 60-foot-wide strip along an unimproved road that connects Tin Mine Road and Lakepointe Drive. Approximately 128 acres of the SOI extend into the Lake Elsinore Area Plan; this area consists of I-15 and undeveloped land in the hills northeast of Lee Lake. The City of Corona is not mentioned in the Lake Elsinore Area Plan and is not discussed in detail in the Lake Mathews/Woodcrest Area Plan. Figure 5.4-1, *Western Riverside County MSHCP Criteria Cells and Subunits*, identifies the elements of the Western Riverside MSHCP within the City and SOI. A "cell" is a 160-acre area (one-quarter of a quadrangle section, not tied to specific assessor parcels), also defined strictly for planning purposes. Several cell groups are defined that meet MSHCP criteria for conservation.

- **Subunit 1 (Santa Ana River to Santa Ana Mountains)** is in the northwest portion of the Temescal Canyon Area Plan, encompassing the westernmost portion of the City along with parts of the Prado Basin in the West SOI. The target acreage range for additional reserve lands within this subunit is 250 to 550 acres. Planning species include the coast range newt (*Taricha torosa*), coastal California gnatcatcher (*Polioptila californica californica*), Cooper's hawk (*Accipiter cooperi*), bobcat (*Lynx rufus*), mountain lion (*Puma concolor*), and western pond turtle (*Emys marmorata*). Biological issues and considerations, which are not

MSHCP requirements but should be considered during assembly of reserve lands for this subunit, include the following:

- Provide for and maintain connection(s) from Prado Basin and the Santa Ana River to Chino Hills State Park outside the plan area.
- Maintain linkage area for bobcat.
- Maintain linkage area for mountain lion.
- Maintain core and linkage habitat for coast range newt.
- Maintain core and linkage habitat for western pond turtle.

- **Subunit 2 (Prado Basin)** is north of Subunit 1 in the northwest portion of the Temescal Canyon Area Plan. This subunit also encompasses parts of the West SOI and the westernmost part of the City of Corona. Target acreage range for additional reserve lands in this subunit is 200 to 395 acres. Planning species include the coast range newt, cactus wren (*Campylorhynchus brunneicapillus)*, California horned lark (*Eremophila alpestris actia*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), bobcat, mountain lion, and western pond turtle. Biological issues and considerations for the Prado Basin Subunit, which are not MSHCP requirements but should be considered during assembly of reserve lands, include the following:

  - Provide and maintain connection(s) from Prado Basin and the Santa Ana River to Chino Hills State Park outside the plan area.
  - Maintain linkage area for bobcat and mountain lion.
  - Maintain core and linkage habitat for coast range newt and western pond turtle.

- **Subunit 3 (Temescal Wash-West)** is in the southeast portion of the City and SOI, encompassing the eastern half of the southern portion of the SOI (Temescal Canyon), much of the El Cerrito area of the eastern portion of the SOI, and small portions of the City of Corona. Target acreage range for additional reserve lands in this subunit is 2,790 to 4,415 acres. Planning species include Bell's sage sparrow (*Artemisiospiza belli*), coastal California gnatcatcher, Cooper's hawk, downy woodpecker (*Picoides pubescens*), least Bell's vireo (*Vireo bellii pusillus*), loggerhead shrike (*Lanius ludovicianus*), Southern California rufous-crowned sparrow (*Aimophila ruficeps*), southwestern willow flycatcher (*Empidonax traillii extimus*), white-tailed kite, yellow-breasted chat (*Icteria virens*), yellow warbler (*Setophaga petechial*), bobcat, mountain lion, Stephens' kangaroo rat, Coulter's Matilija poppy (*Romneya coulteri*), long-spined spineflower (*Chorizanthe polygonoides*), many-stemmed dudleya (*Dudleya multicaulis*), Munz's onion (*Allium munzii)*, Palmer's grapplinghook (*Harpagonella palmeri*), peninsular spine flower (*Chorizanthe leptotheca*), small-flowered microseris (*Microseris douglasii*), small-flowered morning glory (*Convolvulus simulans*), and smooth tarplant (*Centromadia pungens* ssp. *laevis*). Biological issues and considerations include:

  - Conserve existing wetlands in the Temescal Canyon Wash with a focus on conservation of existing riparian, woodland, coastal sage scrub, alluvial fan scrub, and open water habitats.

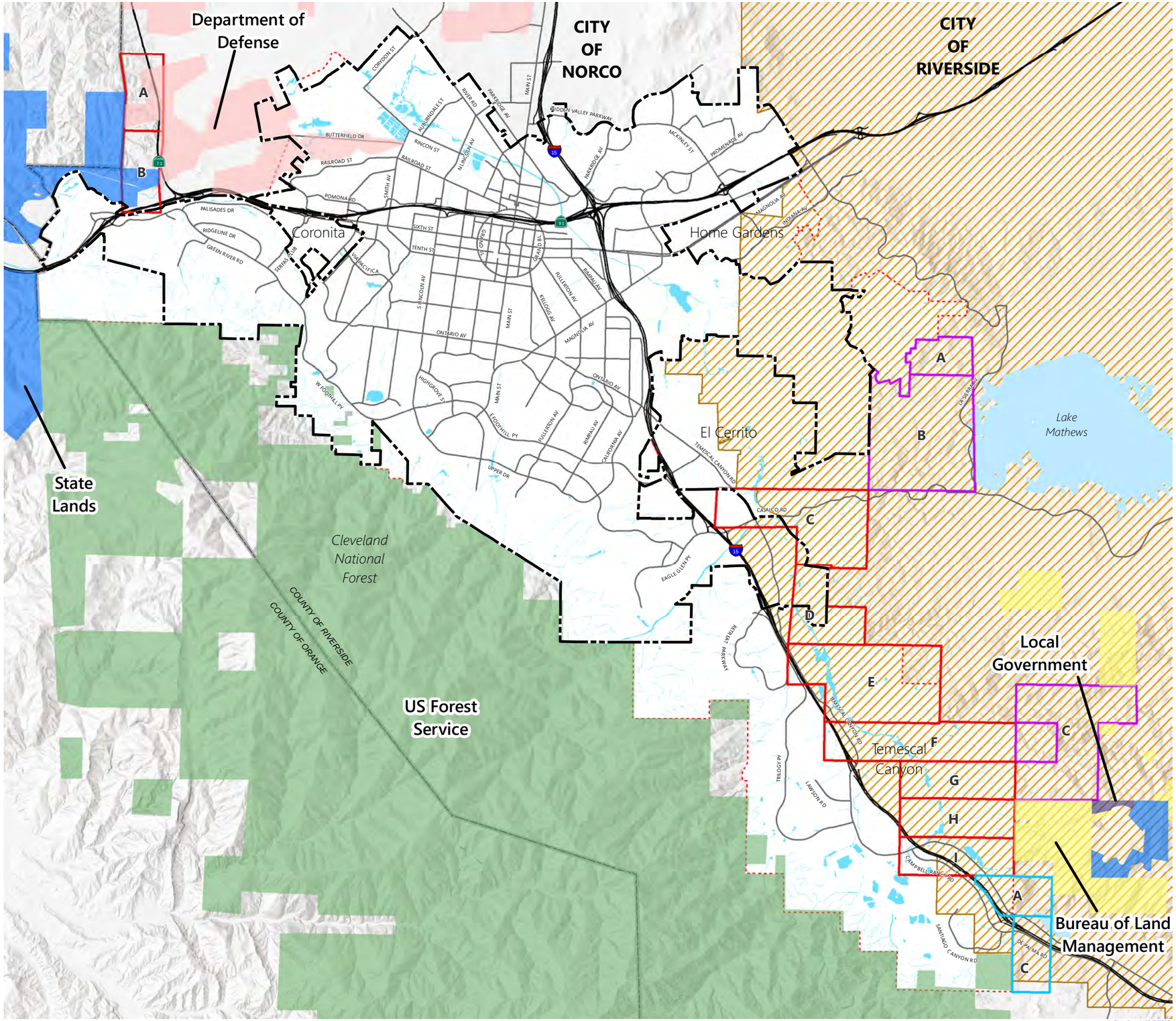


Figure 5.4-1

# WESTERN RIVERSIDE COUNTY MSHCP CRITERIA CELLS AND SUBUNITS

## Legend

- City Boundary
- Sphere of Influence Areas

**Administrative Unit**

- Bureau of Land Management
- US Forest Service
- Department of Defense
- Local Government
- State Lands

**MSHCP Cell Groups**

- Elsinore Area Plan
- Lake Mathews/Woodcrest Area Plan
- Temescal Canyon Area Plan
- Open Water
- Stephens Kangaroo Rat Fee Area

*Source: SCWA 2017*

CORONA General Plan EIR

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PLACEWORKS

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- Conserve upland habitat adjacent to the Temescal Canyon Wash to augment existing upland habitat conservation in the Lake Matthews/Estelle Mountain Reserve areas and provide for contiguous connection of upland habitat blocks from the existing reserve to the Temescal Canyon Wash. Habitat conservation should focus on blocks of existing upland habitat east of the Temescal Canyon Wash connecting to the Lake Matthews/Estelle Mountain Reserve.
- Conserve habitat for least Bell's vireo and southwestern willow flycatcher along the Temescal Canyon Wash.
- Conserve clay soils supporting sensitive plant species know to occupy the Temescal Canyon Area Plan, including Munz's onion, Palmer's grapplinghook, small-flowered morning glory, long-spined spine flower, small-flowered microseris, and many-stemmed dudleya.
- Conserve floodplain areas supporting sensitive plant species known to occupy the Temescal Canyon Area Plan, including peninsular spine flower, smooth tarplant, and Coulter's Matilija poppy.
- Provide for and maintain a continuous linkage along the Temescal Canyon Wash from the southern boundary of the Temescal Canyon Area Plan to the Santa Ana River. It is recognized that the connection from the northern boundary of the Criteria Area along the Temescal Canyon Wash to the Santa Ana River generally consists of a concrete channel. This channel will remain in its existing condition with implementation of the MSHCP.
- Maintain core and linkage habitat for bobcat.
- Maintain linkage area for mountain lion and for Stephens' kangaroo rat along the Temescal Canyon Wash.

- **Subunit 4 (La Sierra Hills/Lake Mathews-West)** is in the eastern portion of the City and SOI, encompassing the easternmost portion of the City and a portion of the El Cerrito area of the eastern SOI. Target acreage range for additional reserve lands in this subunit is 210 to 355 acres. Planning species include Bell's sage sparrow, coastal California gnatcatcher, Cooper's hawk, loggerhead shrike, Southern California rufous-crowned sparrow, white-tailed kite, bobcat, mountain lion, and Stephens' kangaroo rat. Biological issues and considerations include:
  - Provide for and maintain a connection from the eastern edge of the Temescal Canyon Wash to the existing Lake Mathews/Estelle Mountain Reserve.
  - Augment upland conservation in the La Sierra Hills area provided in Subunit 1 of the Lake Mathews Area Plan.
  - Maintain core area for bobcat and Stephens' kangaroo rat.
  - Maintain linkage area for mountain lion.

- **Subunit 5 (Temescal/Santa Ana Mountains)** is in the southeast portion of the Temescal Canyon area. Target acreage range for additional reserve lands in this subunit is 35 to 85 acres. Planning species include Bell's sage sparrow, coastal California gnatcatcher, and bobcat. Biological issues and considerations, which are not MSHCP requirements, include:

  - Provide for upland linkage from the Temescal Canyon Wash to Santa Ana Mountains.
  - Maintain linkage area for bobcat.

### *Stephens' Kangaroo Rat Habitat Conservation Plan*

In addition to the Western Riverside County MSHCP, there is a long-term (30-year) HCP for Stephens' kangaroo rat. Approved by the USFWS in 1996, the HCP granted an incidental take permit for Riverside County. The HCP covers 533,954 acres of Riverside County, including an estimated 30,000 acres of occupied habitat. The plan authorizes the incidental take of up to half of the occupied habitat remaining in the HCP plan area while using development fees to implement the plan, purchase private property, and create a reserve system. The Stephens' kangaroo rat HCP and corresponding permits are in effect for areas covered by the Western Riverside County MSHCP.

The Stephens' kangaroo rat HCP and fee area overlaps with the eastern and southern portions of the City and SOI. The HCP is administered by the Riverside County Habitat Conservation Agency. While the core reserves established by the Stephens' kangaroo rat HCP are managed as part of the MSHCP Conservation Area, the Stephens' kangaroo rat HCP still provides take authorization for Stephens' kangaroo rat within its boundaries. The MSHCP provides take authorization for Stephens' kangaroo rat outside of the area already covered by the Stephens' kangaroo rat HCP, as described in Volume II of the final MSHCP.

## Local Laws

The City participates in the regional habitat conservation plans identified above to protect its biological resources. In addition, the City's municipal code includes regulations to protect resources in the City.

### *Chapter 16.33, MSHCP Mitigation Fee*

The purpose and intent of this chapter is to establish a development mitigation fee to: a) help fund the maintenance of biological diversity and the natural ecosystem processes that support this diversity; b) protect vegetation communities and natural areas within the City and western Riverside County which are known to support threatened, endangered or key sensitive populations of plant and wildlife species; c) maintain economic development within the City and the region through the implementation of a system of reserves that will provide for permanent open space, community edges, and habitat conservation for species covered by the MSHCP.

The MSHCP requires that individuals, businesses, and public agencies proposing development in the "criteria area" of the MSHCP obtain approval from the Regional Conservation Authority and a permit from the local responsible agency. Criteria areas include the cell groups described above. Projects that are approved must pay

fees for review and construction of the project. Fee Ordinance 2678 and Resolution 2003-141 in Chapter 16.33 of the municipal code describes this process.

***Chapter 12.22, Community Forestry Program***

Chapter 12.22 of the municipal code recognizes, designates, and protects landmark trees. Pursuant to the municipal code, the City Council can designate a tree as a "landmark tree" on city property if it meets certain criteria adopted by resolution of the council. The municipal code restricts permanent removal of landmark trees except for emergency situations.

### 5.4.1.2 EXISTING CONDITIONS

Several large areas of open space with biological conservation values surround the City and SOI, including Chino Hills State Park, Cleveland National Forest, Lake Mathews Estelle Mountain Reserve, and Prado Basin, as shown in Figure 5.4-2, *Conservation Lands*. These large areas support a variety of plants and animals native to California.

The spaces that are within the MSHCP plan area form parts of the Core Areas and Linkages as defined in the MSHCP and function as valuable, unfragmented habitats. Lands within the City are primarily developed, but the SOI includes some areas of agriculture and natural vegetation. A large proportion of the City is highly urbanized and provides minimal habitat value for sensitive and special status species. Most native species and natural communities are expected to occupy less developed areas.

#### Sensitive Resources

Literature and database resources were queried within the eight USGS 7.5-minute topographic quadrangles encompassing the City and SOI for records of sensitive natural communities and species: Prado Dam, Corona North, Riverside West, Black Star Canyon, Corona South, Lake Mathews, Alberhill, and Santiago Peak. Although this encompasses an area somewhat larger than the City and SOI, virtually all of the species with records in this vicinity have some potential to occur. The only exceptions are species that are restricted to much higher elevations and species that depend on resources that are entirely absent—for example, if there were records of marine species.

##### *Sensitive Natural Communities*

Sensitive natural communities and special status plants species were described using the CNPS ranking system, which includes the CNPS Global/State Rank and the California Rare Plant Rank (CRPR). The Global Rank is a reflection of the overall status of an element throughout its global range, and the State Rank refers to the imperilment status only within California's state boundaries. Special status wildlife species were described using the CNDDB Global and State Ranking (see Appendix E for the definition of the rankings).

Sensitive or special status communities are vegetation types, associations, or subassociations with a Global or State Rank of 3 or lower; additionally, riparian communities are always considered sensitive. A CNDDB query identified 12 special status natural communities that occur in the study area, as shown in Table 5.4-1, *Sensitive Natural Communities in the Study Area*. Of these communities, six sensitive habitats have CNDDB records in

the City and SOI. These habitats include Southern California Arroyo Chub/Santa Ana Sucker Stream, Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Riparian Forest, Southern Sycamore Alder Riparian Woodland, and Southern Willow Scrub. All of the sensitive communities documented within the study area are associated with ephemeral or perennial water features, such as streams and washes. These communities often provide valuable habitat for wildlife, and in some cases, may contribute to wildlife movement.

Table 5.4-1 Sensitive Natural Communities in the Study Area

| Natural Community | Global / State Rank |
|---|---|
| California Walnut Woodland | G2/S2.1 |
| Canyon Live Oak Ravine Forest | G3/S3.3 |
| Riversidean Alluvial Fan Sage Scrub | G1/S1.1 |
| Southern California Arroyo Chub/Santa Ana Sucker Stream | GNR/SNR |
| Southern Coast Live Oak Riparian Forest | G4/S4 |
| Southern Cottonwood Willow Riparian Forest | G3/S3.2 |
| Southern Interior Cypress Forest | G2/S2.1 |
| Southern Riparian Forest | G4/S4 |
| Southern Riparian Scrub | G3/S3.2 |
| Southern Sycamore Alder Riparian Woodland | G4/S4 |
| Southern Willow Scrub | G3/S2.1 |
| Valley Needlegrass Grassland | G3/S3.1 |

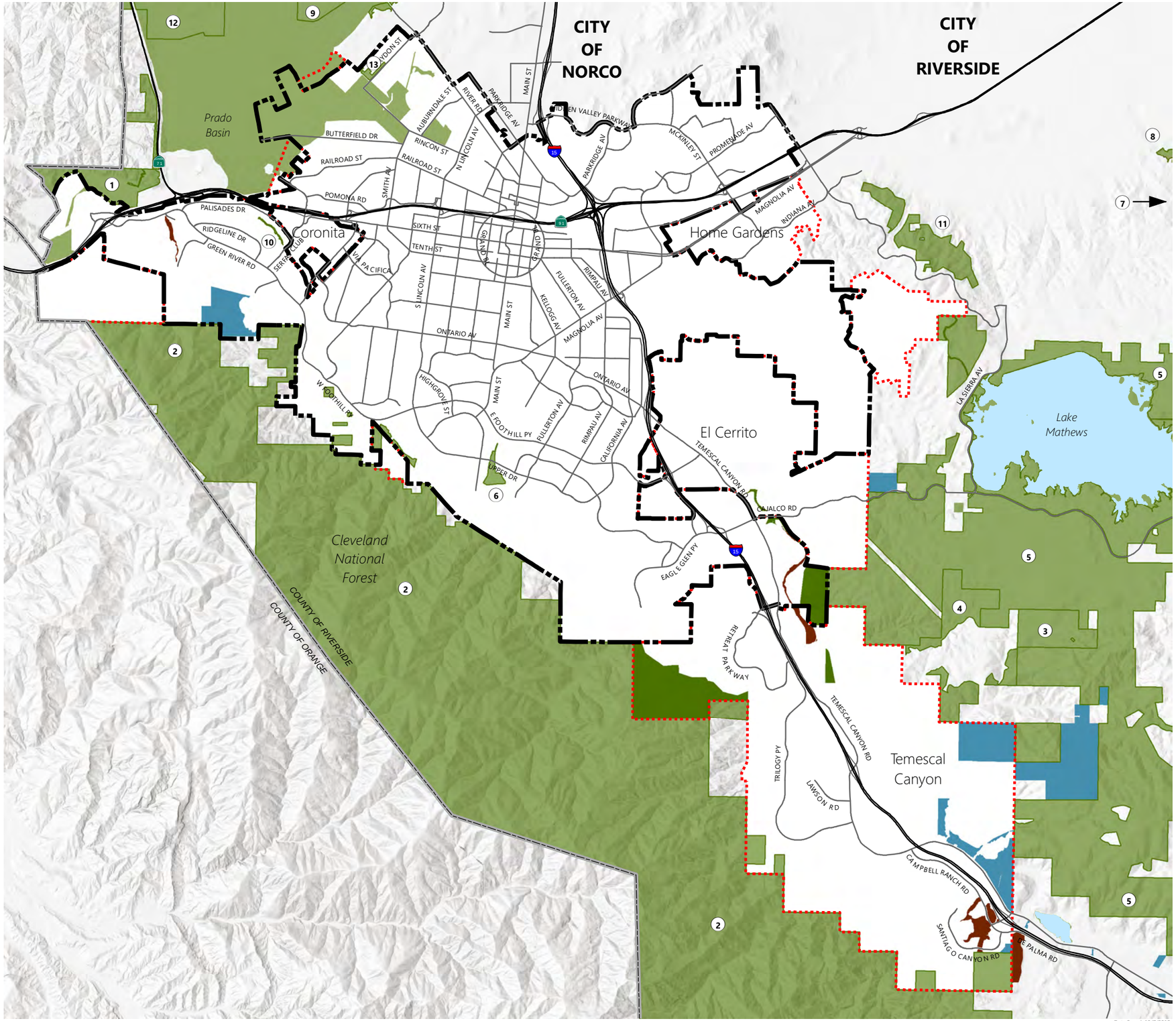
Note: Shading designates communities identified in the study area that have CNDDB records.
G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
GNR = Global Rank not yet assessed.
S1 = Critically Imperiled – Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
S2 = Imperiled – Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
S3 = Vulnerable – Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
S4 = Apparently Secure – Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
0.1: Seriously threatened in California.
0.2: Fairly threatened in California.
0.3: Not very threatened in California.
SNR = State Rank not yet assessed

### *California Walnut Woodland*

California walnut woodland is an open woodland found in relatively moist, fine-textured soils of valley slopes and bottoms and often surrounding rocky outcrops. This community is dominated by California walnut (*Juglans californica*), with an open canopy that allows for the growth of a grassy understory. The understory typically consists of nonnative, winter-active annuals that complete their growth cycle before the leafy canopy emerges in spring. Other species associated with this community include sugar bush (*Rhus ovata*), coast live oak (*Quercus agrifolia*), Engelmann oak (*Quercus engelmannii*), skunkbush (*Rhus trilobata*), red brome (*Bromus rubens*), and horehound (*Marrubium vulgare*).

Figure 5.4-2

# CONSERVATION LANDS




Date Saved: 10/7/2019

## Legend

- City Boundary
- Sphere of Influence Areas
- MSHCP Conserved Lands
- RCA Conserved Lands
- RCA Conservation Easements
- Public Quasi-Public Conserved Lands
  - 1 - Chino Hills State Park
  - 2 - Clevland National Forest
  - 3 - El Sobrante Landfill
  - 4 - El Sobrante HCP
  - 5 - Lake Mathews / Estelle Mountain Reserve
  - 6 - Main Street Channel
  - 7 - Mockingbird Canyon Levee
  - 8 - Mockingbird Canyon Reservoir
  - 9 - Prado Basin Park
  - 10 - RCRCD Thomas Ranch
  - 11 - Riverside Land Conservancy MOU
  - 12 - Santa Ana River Regional Park
  - 13 - Stagecoach Park

Notes:
MSHCP Conserved Lands are owned and managed by the Riverside-Corona Resource Conservation District (RCRCD).

*Source:*
*Western Riverside County Regional Conservation Authority (RCA) 2017*

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0 0.5 1 1.5 2 Miles

PLACEWORKS

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### *Canyon Live Oak Ravine Forest*

Canyon live oak ravine forest is a tall, densely canopied forest that grows on steep, rocky slopes with little soil development. This community is dominated by canyon live oak (*Quercus chrysolepis*) with little understory. Trees within this community often have multiple trunks, possibly from crown-sprouting after fires. This community can be found in a transitional zone adjacent to montane chaparral and low elevation coniferous and broadleaved forests. Other species typically associated with canyon live oak ravine forest include incense cedar (*Calocedrus decurrens*), tanoak (*Lithocarpus densiflorus*), Coulter pine (*Pinus coulteri*), Douglas fir (*Pseudotsuga menziesii*), and California laurel (*Umbellularia californica*).

### *Riversidean Alluvial Fan Sage Scrub*

Riversidean alluvial fan sage scrub grows on well drained, sandy and rocky alluvial soils deposited by streams that experience periodic flooding along the base of the San Gabriel, San Bernardino, and San Jacinto mountains. This community is typically dominated by scale-broom (*Lepidospartum squamatum*), which is considered an indicator species. Species in this community consists of a mix of riparian species, including drought-deciduous (plants that drop their leaves during drought periods) subshrubs and large evergreen woody shrubs that adapted to intense, periodic flooding events. Due to the periodic flooding and erosion, pioneer, intermediate, and mature stages of alluvial fan sage scrub plant communities are often distinguished. These stages vary from sparse vegetation and low diversity to dense subshrubs and evergreen woody shrubs. Species associated with this community include California buckwheat (*Eriogonum fasciculatum*), coastal sagebrush (*Artemisia californica*), brittlebush (*Encelia farinose*), white sage (*Salvia apiana*), California sycamore (*Platanus racemosa*), deerweed (*Lotus scoparius*), and mule fat (*Baccharis salicifolia*).

### *Southern California Arroyo Chub/Santa Ana Sucker Stream*

Southern California Arroyo Chub/Santa Ana Sucker streams are primarily located in southern California, including in the Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita River drainages, and Malibu and San Juan creeks. These habitats fluctuate in water levels and temperature due to large winter storms and low summer flows. The Arroyo chub (*Gila orcutti*) has adapted to withstand these temperature fluctuations and prefers areas with sandy or muddy substrates in slow-flowing waters. This species is omnivorous and primarily feeds on algae and water fern (*Azolla* spp.) and small invertebrates. The Santa Ana sucker (*Catostomus santaanae*) is typically found in cool water with sand or cobble substrates and boulders. This species requires shallow gravelly riffles for spawning. Santa Ana suckers are often associated with algae, their primary food source. Southern California Arroyo Chub/Santa Ana Sucker Stream is not listed as a vegetation community in the Holland Code, which is a classification system for vegetation and uses a hierarchical classification system, but is considered a sensitive habitat in CNDDB.

### *Southern Coast Live Oak Riparian Forest*

Southern coast live oak riparian forest is found in the canyons and valleys of coastal southern California. This community is a dense evergreen woodland dominated by coast live oak. It occurs along large streams in outer floodplains and bottomlands on rich, fine-grained alluvium. Southern coast live oak riparian forest typically has a closed or nearly closed canopy with an understory that is rich in herbs but poor in understory shrubs.

Species typically associated with this community include bigleaf maple (*Acer macrophyllum*), Douglas' sagewort (*Artemesia douglasiana*), milkmaids (*Cardamine californica*), spotted hideseed (*Eucrypta chrysanthemifolia*), toyon (*Heteromeles arbutifolia*), heartleaf keckiella (*Keckiella cordifolia*), pink honeysuckle (*Lonicera hispidula*), Cucamonga manroot (*Marah macrocarpus*), blue fiesta flower (*Pholistoma auritum*), skunkbush, California wildrose (*Rosa californica*), California blackberry (*Rubus ursinus*), blue elderberry (*Sambucus mexicana*), snowberry (*Symphoricarpos mollis*), poison oak (*Toxicodendron diversilobum*), and California laurel.

***Southern Cottonwood-Willow Riparian Forest***

Southern cottonwood-willow riparian forest is a tall, open, broad-leaved, winter-deciduous riparian forest found along perennial wet streams. This community is dominated by Fremont cottonwood (*Populus fremontii*), black cottonwood (*Populus trichocarpa*), and several tree willow species (*Salix* spp.), and contains an understory of shrubby willows. This community is primarily found in subirrigated and frequently overflowed lands, which provide the moist, bare mineral soils required for the germination and establishment of the dominant species. Other plant species associated with this community include California mugwort (*Artemisia douglasiana*), mule fat, wild cucumber, California sycamore, Goodding's black willow (*Salix gooddingii*), sandbar willow (*Salix exigua* var. *hindsiana*), Pacific willow (*Salix lasiandra*), arroyo willow (*Salix lasiolepis*), and stinging nettle (*Urtica dioica*).

***Southern Interior Cypress Forest***

Southern interior cypress forest is a fairly dense, fire-maintained, low forest that occurs in isolated groves within chaparral or pinyon juniper woodland. The dominant species in this community is dependent on elevation. The dominant species include either the Piute cypress (*Cupressus nevadensis*), Forbes' cypress (*Cupressus forbesii*), or Cuyamaca cypress (*Cupressus stephensonii*). Stands are often uniform in age and may vary in spacing due to fire history. Other species associated with this community include chamise (*Adenostoma faciculatum*), Eastwood's manzanita (*Arctostaphylos glandulosa*), mountain mahogany, (*Cercocarpus betuloides*), California buckwheat, toyon, California juniper (*Juniperus californica*), Coulter pine, and pinyon pine (*Pinus monophylla*

***Southern Riparian Forest***

Southern riparian forest is a general vegetation description in the Holland Code that includes three elements: southern coast live oak riparian forest (61310), southern arroyo willow riparian forest (61320), and Southern cottonwood-willow riparian forest. Southern arroyo willow riparian forest is listed in Holland, but does not have a description (Holland 1986). The other two vegetation communities are described in separate sections above. Southern riparian forests all occur along streams in canyons and valleys. Species that dominate each community vary based on vegetation type, but are typically coast live oak, willows, or a combination of cottonwood and willows

***Southern Riparian Scrub***

Southern riparian scrub is a dense riparian community found along major river systems where flood scour occurs, and can also be found in smaller drainages influenced by urban and agricultural runoff. Southern riparian scrub is often adjacent to and encroaches on coastal marsh habitats. This community is characterized

by small trees or shrubs, such as willows, but lacks taller riparian trees. Species typically associated with southern riparian scrub include arroyo willow, other willow species, and desert broom (*Baccharis sarothroides*).

### *Southern Sycamore-Alder Riparian Woodland*

Southern sycamore-alder riparian woodland is a tall, open, broad-leaved, winter-deciduous woodland that is dominated by California sycamore and white alder (*Alnus rhombifolia*), which are often codominant or subcodominant. White alder favors perennial stream systems, while western sycamore favors a more intermittent flooding regime. These stands rarely form closed canopy forests and often contain a dense understory of hard drought–resistant evergreens and deciduous species. Other species associated with southern sycamore-alder riparian woodland include bigleaf maple, Douglas' sagewort, California spikenard (*Aralia californica*), scouringrush horsetail (*Equisetum hyemale*), smilograss (*Oryzopsis miliacea*), coast live oak, California blackberry, blue elderberry, poison oak, California laurel, and stinging nettle.

### *Southern Willow Scrub*

Southern willow scrub is characterized by broad-leafed, winter deciduous riparian thickets that grow in loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows. This community is dominated by several willow species (*Salix* spp.), with scattered emergent Fremont cottonwood and California sycamore. Stands of this community are typically dense, which limits the understory growth. This community requires repeated flooding events to prevent succession to the southern cottonwood-sycamore riparian forest community. Species associated with this community include narrowleaf willow (*Salix exigua*), black willow, red willow (*Salix laevigata*), and arroyo willow.

### *Valley Needlegrass Grassland*

Valley needlegrass grassland is a midheight grassland dominated by perennial, tussock-forming purple needlegrass (*Stipa pulchra*). This community is usually found on fine-textured clay soils that are moist or waterlogged during winter and dry during summer. Native and nonnative annuals often occur between the perennial species and may exceed the percentage cover of the needlegrass. Other species associated with this plant community include boreal yarrow (*Achillea borealis*), blow wives (*Achyrachaena mollis*), mountain dandelion (*Agoseris heterophylla*), common wild oat (*Avena fatua*), goldenstar (*Bloomeria crocea*), golden brodiaea (*Brodiaea lutea*), ripgut brome (*Bromus diandrus*), softbrome (*Bromus hordeaceus*), red brome, California soaproot (*Chlorogalum pomeridianum*), winecup clarkia (*Clarkia purpurea*), Sierra shooting star (*Dodecatheon jeffreyi*), California melic (*Melica californica*), small flowered melic (*Melica imperfecta*), attenuate Indian paintbrush (*Orthocarpus attenuates*), California plantain (*Plantago hookeriana*), pine-bluegrass (*Poa scabrella*), and nodding needlegrass (*Stipa cernua*).

## *Critical Habitat*

The USFWS designates critical habitat for listed endangered or threatened species of flora and fauna. Critical habitat is defined in FESA as habitat deemed essential to the survival of a federally listed species. Seven animals and one plant that have been designated as federal endangered (FE), federal threatened (FT), and/or state endangered (SE) have designated critical habitat areas in the vicinity of the study area, as identified in

Figure 5.4-3, *Designated Critical Habitat in the City and SOI*. Critical habitat for five species has been designated within or adjacent to the study area:

- least Bell's vireo (FE; SE)
- western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) (FT; SE)
- southwestern willow flycatcher (FE; SE)
- Santa Ana sucker (*Catostomas santaanae*) (FT)
- coastal California gnatcatcher (FT): Northeast-facing foothills of the Cleveland National Forest, southwest of the City

The critical habitat areas for least Bell's vireo, western yellow-billed cuckoo, and southwestern willow flycatcher are at the northern end of the City on and around the Prado Reservoir. The Santa Ana River, which is listed as critical habitat for Santa Ana sucker, flows north of SR-91 and through the northwestern corner of the City. Coastal California gnatcatcher critical habitat is widely distributed in Chino Hills State Park and the eastern foothills of the Cleveland National Forest. It is primarily adjacent to the City. Critical habitat for Braunton's milk-vetch has been delineated within the study area but outside the City and SOI.

### *Special Status Species*

The CDFW defines special status animals, plants, and communities as those where at least one of the following conditions applies (CDFW 2017):

- Officially listed or proposed for listing under the state and/or federal ESA.
- Considered by the CDFW to be a Species of Special Concern (SSC).
- Listed by the CNPS with a Rare Plant Rank (RPR).
- Included on other lists, such as Riverside County.
- Taxa (groups of one or more populations of an organism or organisms seen by taxonomists to form a unit) that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act Guidelines.
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range but not currently threatened with extirpation.
- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California.
- Taxa closely associated with a habitat that is declining in California at a significant rate (wetlands, riparian, vernal pools, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, etc.).

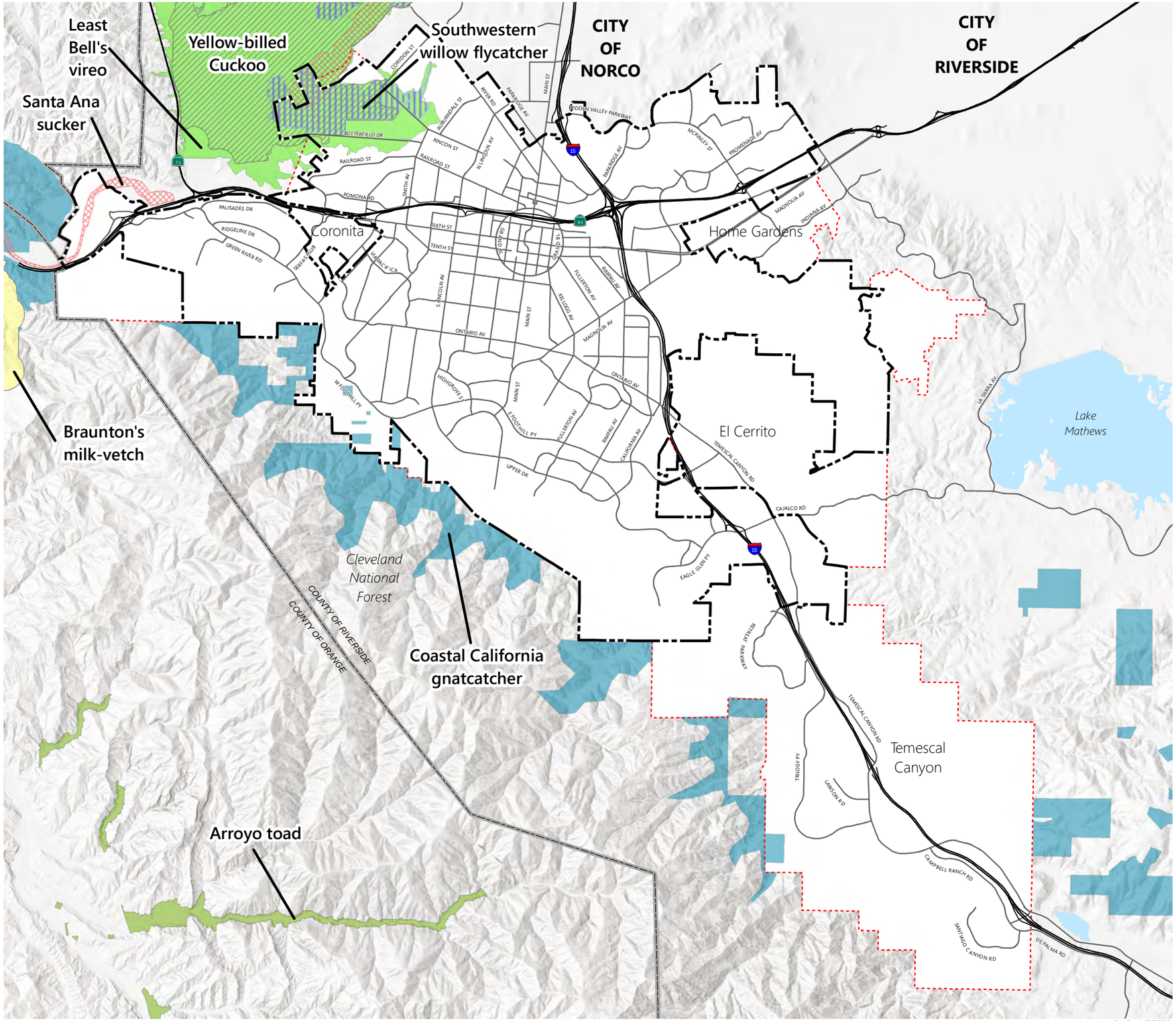


Figure 5.4-3

# Designated Critical Habitat in the City and SOI

Legend

- City Boundary
- Sphere of Influence Areas

**Critical Habitat Area**

- Braunton's milk-vetch
- Arroyo toad
- Least Bell's vireo
- Santa Ana sucker
- Southwestern willow flycatcher
- Yellow-billed Cuckoo
- Coastal California gnatcatcher

*Source:*
*SCWA 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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- Taxa designated as a special status, sensitive, or declining species by other state or federal agencies or a nongovernmental organization and determined by the state to be rare, restricted, declining, or threatened across their range in California.

### *Special Status Plants*

A review of CNDDB and the CNPS Rare Plant Inventory identified species that may occur in the City or SOI identified 64 special status species have CNDDB or the CNPS Rare Plant Inventory records within the study area (see Table 5.4-2, *Special Status Plant Species with Records in the Study Area*, and Figure 5.4-4, *California Natural Diversity Database Records in the Region*).

Table 5.4-2 Special Status Plant Species with Records in the Study Area

| Species Name | Habitat | Status | CRPR | Most Recent CNDDB Siting |
|---|---|---|---|---|
| *Abronia villosa* var. *aurita* chaparral sand-verbena | Chaparral, coastal scrub, desert dunes. Sandy areas. 60–1,570 m.[1] | - | 1B.1 | City – 1934 SOI – 2015 |
| *Allium munzii* Munz's onion[3] | Chaparral, coastal scrub, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Heavy clay soils; grows in grasslands & openings within shrublands or woodlands. 375–1,040 m.[1] | FE, ST | 1B.1 | SOI – 2011 |
| *Ambrosia pumila* San Diego ambrosia[3] | Chaparral, coastal scrub, valley and foothill grassland. Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3–580 m.[1] | FE | 1B.1 | |
| *Asplenium vespertinum* western spleenwort | Rocky areas in chaparral, cismontane woodland and coastal scrub. Sometimes the base of overhanging boulders. 180–1,000 m.[2] | - | 4.2 | |
| *Astragalus brauntonii* Braunton's milk-vetch[4] | Chaparral, coastal scrub, valley and foothill grassland. Recent burns or disturbed areas; usually on sandstone with carbonate layers. Soil specialist; requires shallow soils to defeat pocket gophers and open areas, preferably on hilltops, saddles or bowls between hills. 3–640 m.[1] | FE | 1B.1 | |
| *Atriplex coronata* var. *notatior* San Jacinto Valley crownscale[3] | Alkaline soils in playas, valleys and foothill grasslands (mesic), and vernal pools. 139–500 m.[2] | FE | 1B.1 | |
| *Atriplex coulteri* Coulter's saltbush | Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 2–460 m. | - | 1B.2 | |
| *Baccharis malibuensis* Malibu baccharis | Coastal scrub, chaparral, cismontane woodland, riparian woodland. In Conejo volcanic substrates, often on exposed roadcuts. Sometimes occupies oak woodland habitat. 150–320 m.[1] | - | 1B.1 | |
| *Brodiaea filifolia* thread-leaved brodiaea[3] | Cismontane woodland, coastal scrub, plays, valleys and foothill grassland, vernal pools, and openings in chaparral. 25–1,120m.[2] | FT, SE | 1B.1 | |
| *Calandrinia breweri* Brewer's calandrinia | Sandy or loamy soils, disturbed sites and burns within chaparral and coastal scrub. 10–1,220 m.[2] | - | 4.2 | |
| *California macrophylla* round-leaved filaree[3] | Cismontane woodland, valley and foothill grassland. Clay soils. 30–1,345 m.[1] | - | 1B.2 | City – 2009 |

Table 5.4-2 Special Status Plant Species with Records in the Study Area

| Species Name | Habitat | Status | CRPR | Most Recent CNDDB Siting |
|---|---|---|---|---|
| *Calochortus catalinae* Catalina mariposa lily | Often occurring in heavy soil in opengrassland or scrub. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. 15–700 m.[2] | - | 4.2 | |
| *Calochortus plummerae* Plummer's mariposa-lily[3,6] | Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60–2,500 m.[1] | - | 4.2 | |
| *Calochortus weedii* var. *intermedius* intermediate mariposa-lily[3] | Coastal scrub, chaparral, valley and foothill grassland. Dry, rocky open slopes and rock outcrops. 60–1,575 m.[1] | - | 1B.2 | City – 2008 SOI – 2008 |
| *Calystegia felix* lucky morning-glory | Meadows and seeps, riparian scrub. Sometimes alkaline, alluvial. 30–215 m. | | 3.1 | |
| *Carex buxbaumii* Buxbaum's sedge | Peatland and wet meadows. Bogs, fens, marshes, swamps, as well as mesic meadows and seeps. 3–3,300 m.[2] | - | 4.2 | |
| *Caulanthus simulans* Payson's jewelflower[3] | Sandy and granitic soils in chaparral, coastal scrub, and pinyon/juniper woodland. 90–2,200 m.[2] | - | 4.2 | |
| *Centromadia pungens* ssp. *laevis* smooth tarplant[3] | Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5–1,170 m.[1] | - | 1B.1 | SOI – 1988 |
| *Chorizanthe leptotheca* Peninsular spineflower[3,6] | Sandy or gravelly soils. Often in alluvial fans with granitic soils. 300–1,900 m.[2] | - | 4.2 | |
| *Chorizanthe parryi* var. *fernandina* San Fernando Valley spineflower | Coastal scrub, valley and foothill grassland. Sandy soils. 15–1,015 m.[1] | PT, SE | 1B.1 | |
| *Chorizanthe parryi* var. *parryi* Parry's spineflower[3,6] | Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90–1,220 m.[1] | - | 1B.1 | |
| *Chorizanthe polygonoides* var. *longispina* long-spined spineflower[3] | Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 30–1,540 m.[1] | - | 1B.2 | |
| *Chorizanthe xanti* var. *leucotheca* white-bracted spineflower | Sandy or gravelly soils in Mojavean desert scrub, pinyon/juniper woodland, and alluvial fans within coastal scrub. 300–1,200 m.[2] | - | 1B.2 | |
| *Clinopodium chandleri* San Miguel savory[3] | Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Rocky, gabbroic or metavolcanic substrate. 120–1,075 m.[1] | - | 1B.2 | |
| *Comarostaphylis diversifolia* ssp. *diversifolia* summer holly | Chaparral, cismontane woodland. Often in mixed chaparral in California, sometimes post-burn. 30–945 m.[1] | - | 1B.2 | |
| *Convolvulus simulans* small-flowered morning-glory[3] | Clay substrates, occasionally serpentine soils. Coastal scrub, valley and foothill grassland, and openings in chaparral. 30–740 m.[2] | - | 4.2 | |
| *Deinandra paniculata* paniculate tarplant | Usually in vernally mesic areas, often with sandy soils in coastal scrub, valley and foothill grassland, and vernal pools. Can also occur in open chaparral, woodland, and disturbed areas. 25–940 m.[2] | - | 4.2 | |

Table 5.4-2 Special Status Plant Species with Records in the Study Area

| Species Name | Habitat | Status | CRPR | Most Recent CNDDB Siting |
|---|---|---|---|---|
| *Diplacus clevelandii* Cleveland's bush monkeyflower[3] | Often in disturbed, rocky, or open areas with gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest. 450–2,000 m.[2] | - | 4.2 | |
| *Dodecahema leptoceras* slender-horned spineflower[3] | Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include *Encelia*, *Dalea*, *Lepidospartum*, etc. Sandy soils. 200–765 m.[1] | FE, SE | 1B.1 | |
| *Dudleya multicaulis* many-stemmed dudleya[3] | Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clayey soils or grassy slopes. 15–790 m.[1] | - | 1B.2 | City – 1996<br>SOI – 1996 |
| *Dudleya viscida* sticky dudleya[3,6] | Coastal scrub, coastal bluff scrub, chaparral, cismontane woodland. On north and south-facing cliffs and banks. 20–870 m.[1] | - | 1B.2 | |
| *Eriastrum densifolium* ssp. *sanctorum* Santa Ana River woollystar[3] | Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180–700 m.[1] | FE, SE | 1B.1 | |
| *Erythranthe diffusus*[5] Palomar monkeyflower[3] | Sandy or gravelly soils in chaparral and lower montane coniferous forest. 1,220–1,830 m.[2] | - | 4.3 | |
| *Harpagonella palmeri* Palmer's grapplinghook[3] | Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. 20–955 m.[1] | - | 4.2 | SOI – 1986 |
| *Hesperocyparis forbesii* Tecate cypress | Closed-cone coniferous forest, chaparral. Primarily on north-facing slopes; groves often associated with chaparral. On clay or gabbro. 60–1,650 m.[1] | - | 1B.1 | |
| *Horkelia cuneata* var. *puberula* mesa horkelia | Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15–1,645 m.[1] | - | 1B.1 | |
| *Juglans californica* Southern California black walnut | Hillsides and canyons, usually with alluvial substrates in chaparral, cismontane woodland, coastal scrub, and riparian woodland. 50–900 m.[2] | - | 4.2 | |
| *Lasthenia glabrata* ssp. *coulteri* Coulter's goldfields[3] | Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1–1,375 m.[1] | - | 1B.1 | |
| *Lepechinia cardiophylla* heart-leaved pitcher sage[3] | Closed-cone coniferous forest, chaparral, cismontane woodland. 520–1,370 m.[1] | - | 1B.2 | |
| *Lepidium virginicum* var. *robinsonii* Robinson's pepper-grass | Chaparral, coastal scrub. Dry soils, shrubland. 4–1,435 m.[1] | - | 4.3 | City – 2010<br>SOI – 2010 |
| *Lilium humboldtii* ssp. *ocellatum* ocellated Humboldt lily[3,6] | Openings within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland. 30–1,800 m.[2] | - | 4.2 | |
| *Microseris douglasii* ssp. *platycarpa* small-flowered microseris[3,6] | Clay soils in cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools. May occur in serpentine outcrops. 15–1,070 m.[2] | - | 4.2 | |
| *Monardella australis* ssp. *jokerstii* Jokerst's monardella | Lower montane coniferous forest, chaparral. Steep scree or talus slopes between breccia. Secondary alluvial benches along drainages and washes. 1,350–1,750 m.[1] | - | 1B.1 | |
| *Monardella hypoleuca* ssp. *intermedia* intermediate monardella | Chaparral, cismontane woodland, lower montane coniferous forest (sometimes). Often in steep, brushy areas. 195–16,750 m.[1] | - | 1B.3 | |

Table 5.4-2 Special Status Plant Species with Records in the Study Area

| Species Name | Habitat | Status | CRPR | Most Recent CNDDB Siting |
|---|---|---|---|---|
| *Monardella hypoleuca* ssp. *lanata* felt-leaved monardella | Rocky, granitic slopes, or hilltops in chaparral and cismontane woodland. 300–1575 m.[2] | - | 1B.2 | |
| *Monardella macrantha* ssp. *hallii* Hall's monardella[3] | Broadleafed upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley and foothill grassland. Dry slopes and ridges in openings. 700–,1770 m.[1] | - | 1B.3 | |
| *Nolina cismontana* chaparral nolina | Chaparral, coastal scrub. Primarily on sandstone and shale substrates; also known from gabbro. 140–1,275 m.[1] | - | 1B.2 | SOI – 1990 |
| *Orcuttia californica* California Orcutt grass[3] | Vernal pools. 15–660 m.[2] | FE, SE | 1B.1 | |
| *Penstemon californicus* California beardtongue[3] | Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Stony slopes and shrubby openings; sandy or granitic soils. 1,170–2,300 m.[1] | - | 1B.2 | |
| *Pentachaeta aurea* ssp. *allenii* Allen's pentachaeta | Valley and foothill grasslands, coastal scrub. Openings in scrub or grassland. 75–520 m.[1] | - | 1B.1 | |
| *Phacelia keckii* Santiago Peak phacelia | Closed-cone coniferous forest, chaparral. Open areas, sometimes along creeks. 545–1,525 m.[1] | - | 1B.3 | |
| *Phacelia stellaris* Brand's star phacelia[3] | Coastal scrub, coastal dunes. Open areas. 3–370 m.[1] | - | 1B.1 | |
| *Pickeringia montana* var. *tomentosa* woolly chaparral-pea | Gabbroic, granitic, and clay soils in chaparral. May occur in washes. 0–1700 m.[2] | - | 4.3 | |
| *Polygala cornuta* var. *fishiae* Fish's milkwort[3,6] | Chaparral, cismontane woodland, and riparian woodland. 100–1000 m.[2] | - | 4.3 | |
| *Pseudognaphalium leucocephalum* white rabbit-tobacco | Riparian woodland, cismontane woodland, coastal scrub, chaparral. Sandy, gravelly sites. 35–515 m.[1] | - | 2B.2 | SOI – 2004 |
| *Romneya coulteri* Coulter's matilija poppy[3,6] | Canyons and washes in chaparral and coastal scrub. Often occurs in burn areas. 20–1,200m.[2] | - | 4.2 | |
| *Senecio aphanactis* chaparral ragwort | Occurs in dry open rocky areas in chaparral, cismontane woodland, and coastal scrub. Sometimes occurs in alkaline flats. 15–800 m.[2] | - | 2B.2 | |
| *Sidalcea neomexicana* salt spring checkerbloom | Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 3–2,380 m.[1] | - | 2B.2 | |
| *Symphyotrichum defoliatum* San Bernardino aster | Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 2–2,040 m.[1] | - | 1B.2 | SOI – 1986 |

Table 5.4-2 Special Status Plant Species with Records in the Study Area

| Species Name | Habitat | Status | CRPR | Most Recent CNDDB Siting |
|---|---|---|---|---|
| *Tortula californica*<br>California screw-moss | Chenopod scrub, valley and foothill grassland. Moss growing on sandy soil. 10–1,460 m.[1] | - | 1B.2 | |

Confirmed CNDDB observations in the City or SOI.

[1] Habitat descriptions were taken from the CNDDB General and Microhabitat descriptions.

[2] Species either not listed on CNDDB or has no observations recorded in CNDDB; habitat descriptions paraphrased from CNPS Rare Plant Inventory and the Jepson Manual.

[3] Species is covered by in the MSHCP.

[4] Braunton's milk-vetch critical habitat present outside the City and SOI.

[5] Species known as *Mimulus diffusus* (CRPR 4.3) in MSHCP and Calflora, *Mimulus palmeri* (which is not a rare species) in TMJ2.

[6] Species not included in the MSHCP "Adequately Conserved" list.

FE = Federally Endangered
FT = Federally Threatened
PT = Proposed Threatened under ESA.
SE = State Endangered
ST = State Threatened

CRPR = California Rare Plant Rank.
1A: Presumed extinct in California
1B: Rare, threatened, or endangered in California and elsewhere.
2: Rare, threatened, or endangered in California, but more common elsewhere.
3: More information needed (Review List)
4: Limited distribution (Watch List)
0.1: Seriously threatened in California.
0.2: Fairly threatened in California.
0.3: Not very threatened in California.

### *Special Status Wildlife*

A review of CNDDB identified species that may occur in the City or SOI shows 59 special status wildlife species have CNDDB records within the study area, as shown in Table 5.4-3, *Special Status Wildlife Species in the Study Area*. Critical habitat for the following species has been documented either in or adjacent to the City or SOI—Santa Ana sucker, western yellow-billed cuckoo, southwestern willow flycatcher, coastal California gnatcatcher, and least Bell's vireo. A description of habitat requirements for these species has been included in Table 5.4-3. Some of the special status species—such as the special status fish, western pond turtle, and two-striped garter snake—require permanent sources of water or specific vegetation community composition for it to be considered habitat.

Table 5.4-3 Special Status Wildlife Species in the Study Area

| Species Name | Habitat[1] | Status | Most Recent CNDDB Siting |
|---|---|---|---|
| Invertebrates | | | |
| Bombus crotchii<br>Crotch bumble bee | Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum. | SA | City – 1933 |
| Branchinecta sandiegonensis<br>San Diego fairy shrimp | Endemic to San Diego and Orange County mesas. Vernal pools. | FE | |
| Carolella busckana[3]<br>Busck's gallmoth | Coastal scrub and coastal dunes. | SA | |
| Ceratochrysis longimala<br>Desert cuckoo wasp | Hosts are unknown. Other members of this genus known as nest parasites of "a variety of genera in the Crabronidae and Vespidae."[4] | SA | |
| Streptocephalus woottoni | Endemic to Western Riverside, Orange, and San Diego counties in | FE | |

Table 5.4-3 Special Status Wildlife Species in the Study Area

| Species Name | Habitat[1] | Status | Most Recent CNDDB Siting |
|---|---|---|---|
| Riverside fairy shrimp[2] | areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season. | | |
| Fish | | | |
| Catostomus santaanae<br>Santa Ana sucker[2, 7, 13] | Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae. | FT | City – 1991<br>SOI – 1991 |
| Gila orcuttii<br>arroyo chub[2] | Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave & San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates. | SSC | City -1997<br>SOI – 1991 |
| Rhinichthys osculus ssp. 3<br>Santa Ana speckled dace | Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles. | SSC | |
| Amphibians | | | |
| Anaxyrus californicus<br>arroyo toad[2] | Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range. | FE, SSC | |
| Lithobates pipiens<br>northern leopard frog | Native range is east of Sierra Nevada-Cascade Crest. Near permanent or semi-permanent water in a variety of habitats. Highly aquatic species. Shoreline cover, submerged and emergent aquatic vegetation are important habitat characteristics. | SSC | |
| Spea hammondii[5]<br>western spadefoot[2] | Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying. | SSC | SOI – 2008 |
| Taricha torosa<br>Coast Range newt[2] | Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over 1 km to breed in ponds, reservoirs and slow-moving streams. | SSC | City – 1999<br>SOI – 1999 |
| Reptiles | | | |
| Anniella stebbinsi<br>southern California legless lizard | Generally, south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally, in moist, loose soil. They prefer soils with a high moisture content. | SSC | |
| Arizona elegans occidentalis<br>California glossy snake | Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils. | SSC | |
| Aspidoscelis hyperythra<br>orange-throated whiptail[2] | Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites. | WL | |

Table 5.4-3 Special Status Wildlife Species in the Study Area

| Species Name | Habitat[1] | Status | Most Recent CNDDB Siting |
|---|---|---|---|
| Aspidoscelis tigris stejnegeri<br>coastal whiptail[2] | Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky. | SSC | SOI – 2016 |
| Coleonyx variegatus abbotti<br>San Diego banded gecko[2] | Coastal & cismontane Southern California. Found in granite or rocky outcrops in coastal scrub and chaparral habitats. | SSC | |
| Crotalus ruber<br>red-diamond rattlesnake[2] | Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects. | SSC | City – 2010<br>SOI – 1992 |
| Emys marmorata<br>western pond turtle[2] | A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying. | SSC | City – 1992 |
| Phrynosoma blainvillii[6]<br>coast horned lizard[2] | Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects. | SSC | City – 1951<br>SOI – 2016 |
| Salvadora hexalepis virgultea<br>coast patch-nosed snake | Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites. | SSC | |
| Thamnophis hammondii<br>two-striped gartersnake | Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 feet elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth. | SSC | |
| Birds | | | |
| Accipiter cooperii<br>Cooper's hawk[2] | Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks. | WL | |
| Agelaius tricolor<br>tricolored blackbird[2] | Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. | CE, SSC | |
| Aimophila ruficeps canescens<br>southern California rufous-crowned sparrow[2] | Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches. | WL | SOI – 2016 |
| Ammodramus savannarum<br>grasshopper sparrow[2,12] | Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting. | SSC | |
| Artemisiospiza belli<br>Bell's sage sparrow[2] | Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart. | WL | |
| Aquila chrysaetos<br>golden eagle[2] | Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas. | FP | City – 2007<br>SOI – 2007 |
| Asio otus<br>long-eared owl | Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or | SSC | |

Table 5.4-3 Special Status Wildlife Species in the Study Area

| Species Name | Habitat[1] | Status | Most Recent CNDDB Siting |
|---|---|---|---|
| | magpies for breeding. | | |
| Athene cunicularia<br>burrowing owl[2] | Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. | SSC | City – 2007<br>SOI – 1986 |
| Buteo swainsoni<br>Swainson's hawk[2] | Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. | ST | City – 1919<br>SOI – 1919 |
| Campylorhynchus brunneicapillus sandiegensis<br>coastal cactus wren[2] | Southern California coastal sage scrub. Wrens require tall opuntia cactus for nesting and roosting. | SSC | |
| Charadrius alexandrinus nivosus<br>western snowy plover | Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting. | FT, SSC | |
| Circus cyaneus<br>northern harrier[2] | Coastal salt & freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. | SSC | |
| Coccyzus americanus occidentalis<br>western yellow-billed cuckoo[2,8] | Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. | FT, SE | City – 2011<br>SOI – 2011 |
| Coturnicops noveboracensis<br>yellow rail | Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands. | SSC | |
| Elanus leucurus<br>white-tailed kite[2] | Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching. | FP | |
| Empidonax traillii extimus<br>southwestern willow flycatcher[2,9] | Riparian woodlands in Southern California. | FE, SE | |
| Eremophila alpestris actia<br>California horned lark[2] | Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats. | WL | |
| Haliaeetus leucocephalus<br>bald eagle[2] | Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter. | SE, FP | |
| Icteria virens<br>yellow-breasted chat[2] | Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground. | SSC | |
| Laterallus jamaicensis coturniculus<br>California black rail | Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. | ST, FP | |
| Plegadis chihi<br>white-faced ibis[2] | Shallow freshwater marsh. Dense tule thickets for nesting, interspersed with areas of shallow water for foraging. | WL | |

Table 5.4-3 Special Status Wildlife Species in the Study Area

| Species Name | Habitat[1] | Status | Most Recent CNDDB Siting |
|---|---|---|---|
| Polioptila californica<br>coastal California gnatcatcher[2,10] | Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied. | FT, SSC | City – 2003<br>SOI – 2002 |
| Setophaga petechia<br>yellow warbler[2] | Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders. | SSC | |
| Vireo bellii pusillus<br>least Bell's vireo[2,11] | Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. | FE, SE | City – 2011<br>SOI – 2014 |
| Mammals | | | |
| Antrozous pallidus<br>pallid bat | Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. | SSC | |
| Chaetodipus fallax fallax<br>northwestern San Diego pocket mouse | Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel. | SSC | City - 2001 |
| Dipodomys merriami parvus<br>San Bernardino kangaroo rat[2] | Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages. | FE, SSC | |
| Dipodomys stephensi<br>Stephens' kangaroo rat[2] | Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil. | FE, ST | City – 1993<br>SOI – 2000 |
| Eumops perotis californicus<br>western mastiff bat | Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels. | SSC | |
| Lasiurus xanthinus<br>western yellow bat | Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees. | SSC | |
| Lepus californicus bennettii<br>San Diego black-tailed jackrabbit[2] | Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges. Coastal sage scrub habitats in Southern California. | SSC | SOI – 2000 |
| Neotoma lepida intermedia<br>San Diego desert woodrat[2] | Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes. | SSC | |

Table 5.4-3 Special Status Wildlife Species in the Study Area

| Species Name | Habitat[1] | Status | Most Recent CNDDB Siting |
|---|---|---|---|
| Nyctinomops femorosaccus pocketed free-tailed bat | Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs. | SSC | |

Confirmed CNDDB observations within the City or SOI.

[1] Habitat descriptions sourced from the general and microhabitat descriptions listed in CNDDB.
[2]: Species included in the MSHCP.
[3] Also known as Eugnosta busckana.
[4] Kimsey, L. 2014. California Cuckoo Wasps in the Family Chrysididae (Hymenoptera). University of California Press. Berkeley, CA.
[5] Species known as Scaphiopus hammondii in the MSHCP.
[6] Species known as Phrynosoma coronata blainvillii in the MSHCP.
[7] Sana Ana sucker critical habitat is within the study area.
[8] Western yellow-billed cuckoo critical habitat is within the study area.
[9] Southwestern willow flycatcher critical habitat is within the study area.
[10] Coastal California gnatcatcher critical habitat is within the study area. Large amounts of critical habitat are adjacent to the study area.
[11] Least Bell's vireo critical habitat is within the study area.
[12] Species not included in the MSHCP "Adequately Conserved Species" list.
[13] Observation for Santa Ana sucker is not a direct species observation; rather, the Santa Ana River was classified as a Southern California Arroyo Chub/Santa Ana Sucker Stream in 1991.

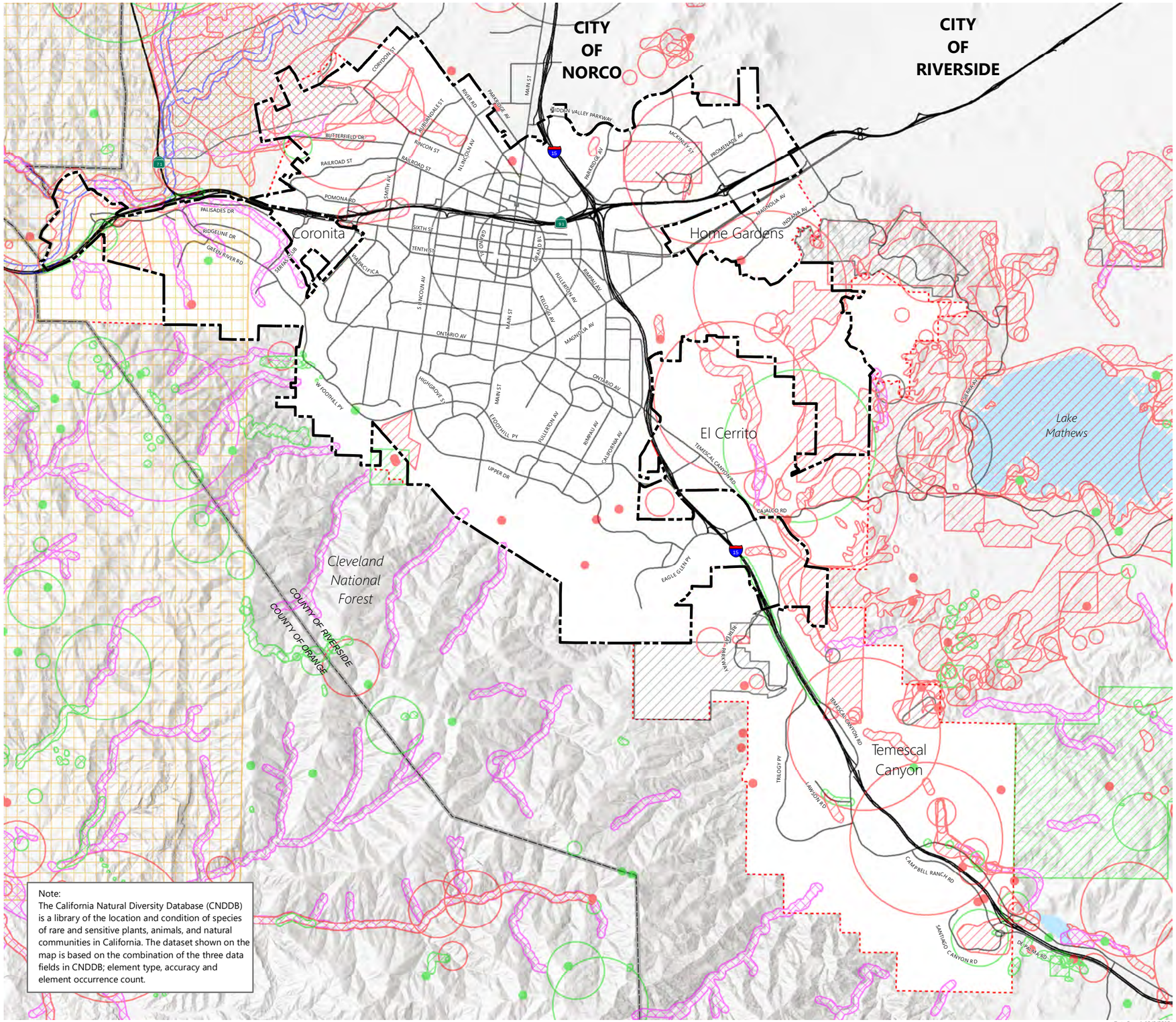
FE = Federally Endangered
FT = Federally Threatened
SE = State Endangered
ST = State Threatened
CE = State Candidate for Endangered Listing
FP = CDFW Fully Protected
SA = CDFW Special Animals
SSC = CDFW Species of Special Concern

## Aquatic Resources

The City is in the Santa Ana River Watershed. Corona and its sphere are crossed by more than 50 ephemeral streams, generally originating in the mountainous areas of the Cleveland National Forest to the southwest of the City and flowing northerly toward the Santa Ana River basin. Artificial ponds and lakes are present, with variable amounts of natural habitat.

### *Drainages*

Several washes run through the city from the southwest: the Temescal Canyon Wash; Bedford Canyon Wash; Joseph Canyon Wash; Main Street Wash; and Mabey Canyon Wash. These drainages are shown in Figure 5.4-5, *Drainages and Associated Riparian Vegetation Communities*. Most of these are confined within concrete channels, although small amounts of vegetation may be present seasonally. The exception to the otherwise channelized drainages is the Temescal Canyon Wash. The Temescal Canyon Wash runs north from Lake Elsinore through both the Temescal Canyon (southern portion of the SOI) and the El Cerrito area in the eastern portion of the SOI, before flowing through the city and ultimately draining to the Santa Ana River. In the city, the Temescal Canyon Wash is a natural channel with riparian vegetation over two sections of its length. The Temescal Canyon Wash flows northerly through the city to the quarry vicinity, where it continues via a concrete channel to the airport. North-northwest of the airport, a natural channel continues into the Prado Basin at N. Lincoln Avenue. In the unchannelized segments of the Temescal Canyon Wash, substantial amounts of riparian vegetation provide habitat for a range of wildlife, including small mammals, amphibians, and birds. The Riverside Canal runs along the northern border of the Home Gardens area. A goal of the MSHCP is to create a connection between Lake Mathews/Estelle Mountain Reserve and the Santa Ana River via the Temescal Canyon Wash to facilitate wildlife movement.




Note:
The California Natural Diversity Database (CNDDB) is a library of the location and condition of species of rare and sensitive plants, animals, and natural communities in California. The dataset shown on the map is based on the combination of the three data fields in CNDDB; element type, accuracy and element occurrence count.

Figure 5.4-4

# California Natural Diversity Database Records in the Region

Legend

- City Boundary

**CNDDB Records**

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)
- Sphere of Influence Areas

*Source:*
*California Department of Fish and Wildlife's Biogeographic Data Branch 2017*

CORONA General Plan EIR

Miles
0 0.5 1 1.5 2

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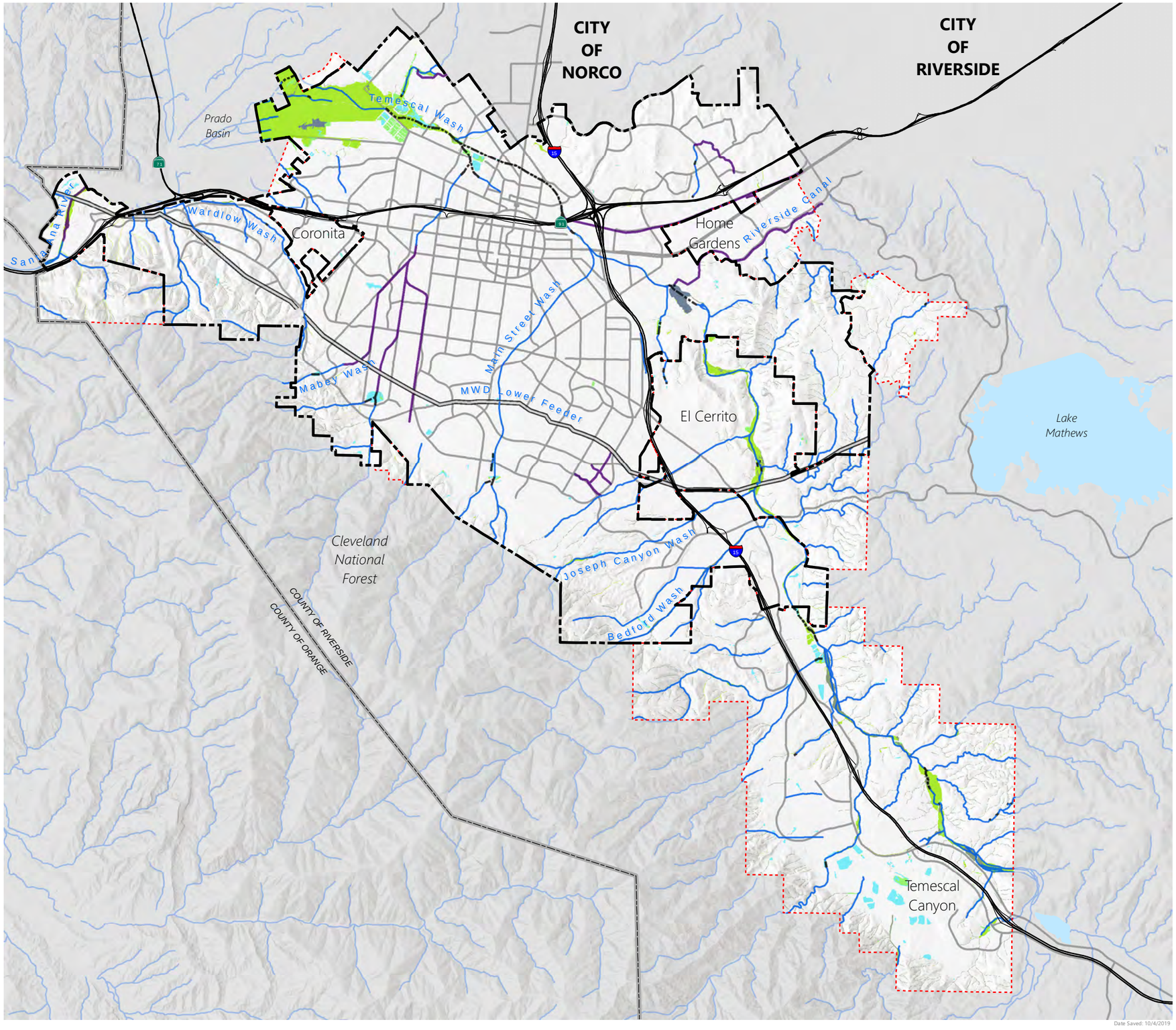


Figure 5.4-5

# DRAINAGES AND ASSOCIATED RIPARIAN VEGETATION COMMUNITIES

## Legend

- City Boundary
- Sphere of Influence Areas
- Artificial Drainage Paths
- Canals and Ditches
- Pipeline
- Streams and Rivers
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Major Roads

*Source:*
*SCWA 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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### *Artificial Lakes*

Artificial (created) lakes and ponds are present at Lake Temescal (southeast of the interchange of SR-91 and I-15), Border Lake (near Brentwood Park), and at the city's golf courses. Lake Temescal is ringed with riparian vegetation and open water areas, providing cover and foraging habitat for birds, amphibians, and western pond turtle. Although Border Lake is surrounded by residential development and lacks riparian plants, open water habitat is present and could be used by birds such as ducks and American coots (*Fulica americana*).

## Vegetation

Vegetation described in this section is based on the generalized and uncollapsed vegetation community classifications in the MSHCP vegetation map, which incorporates updates made in 2012 by CNPS. Natural vegetation communities in the city are primarily coastal sage scrub, grassland, and chaparral; however the majority of the land is classified as developed/disturbed, as shown in Figure 5.4-6, *Vegetation*.

There is an area of riparian scrub, woodland, and forest with interspersed meadows, marshes, and grassland along the northern border of the city. Along part of the western border, just south of SR-91, is an area of chaparral with patches of coastal sage scrub, grassland, woodland and forest, and riparian scrub, woodland, and forest. East of Temescal Lake there is an area of coastal sage scrub with patches of grassland and several small riparian corridors. The southern portion of the city has a relatively intact corridor of riparian scrub, woodland, and forest associated with Temescal Canyon Wash. Native plant communities identified within the study area include coastal sage scrub and southern willow scrub. Landscaped areas of primarily nonnative plant species occur throughout the city. Coast live oak is a protected tree species in the Conservation Element of the Riverside County General Plan; this species exists in scattered locations in the study area and should be given consideration regardless the species' relative abundance.

Natural vegetation communities within the western SOI are primarily chaparral and coastal sage scrub, with patches of grassland. The El Cerrito area in the eastern SOI is dominated by grassland and some coastal sage scrub, with riparian scrub, woodland, forest along the Temescal Canyon Wash and other riparian corridors. The Eagle Valley area is dominated by agricultural land, and Home Gardens is largely developed. Temescal Canyon is characterized by riparian scrub, woodland, and forest along the Temescal Canyon Wash riparian corridor, with adjacent uplands dominated by coastal sage scrub and grassland. The southwestern border of the Temescal Canyon is dominated by chaparral with some coastal sage scrub and montane coniferous forest. Special consideration should be given to coast live oak; it is a regionally common species that is a protected tree species in the Conservation Element of the Riverside County General Plan; this species exists in scattered locations within the study area and should be given consideration regardless the species' relative abundance.

### *Coastal Sage Scrub Alliances*

Areas in the City and SOI containing coastal sage scrub are characterized by the dominance of California sagebrush (*Artemisia californica*) and/or California buckwheat (*Eriogonum fasciculatum*), with variable amounts of laurel sumac (*Malosma laurina*), California encelia (*Encelia californica*), and sage species (e.g., *Salvia mellifera, S. apiana*).

### *Southern Willow Scrub*

The southern willow scrub plant community is present within the City in areas along Temescal Canyon Wash and Bedford Wash, although channelization and clearing have reduced and limited the spread of this habitat type.

### *Nonnative Vegetation*

Nonnative vegetation recorded within the city includes grassland dominated by nonnative species and other ruderal plant communities. Tamarisk (*Tamarix* ssp.) and giant reed (*Arundo donax*) infestations have affected local waterways and places where water collects. As indicated in the biological report, these two species have a rating of "high" on the California Invasive Plant Council (Cal-IPC) list and are defined as species that "have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment." Tamarisk and giant reed are heavy water users with high evapotranspiration rates, provide little nest or foraging habitat, are difficult to control, and can grow into dense monocultures that block access to water for larger wildlife. Infestations can take over large areas, outcompeting native plant species and thereby reducing overall habitat quality.

## Wildlife Movement

Open space areas within the built environment of the City and SOI provide refuge for some wildlife species, particularly birds and small animals such as lizards and butterflies. Golf courses, parks, and cemeteries typically have mature trees and may have water features, both important elements providing food and cover for wildlife. Orchards and some other types of agricultural land uses may also offer some habitat value.

Wildlife species that inhabit the areas that support native vegetation and open space, especially in wet areas such as around Temescal Canyon Wash, include common amphibians such as Baja California tree frog (*Pseudacris hypochondriaca*) and the nonnative American bullfrog (*Rana catesbeiana*). Nonnative fish observed include carp (*Cyprinus carpio*) and mosquitofish (*Gambusia* sp.). Reptiles observed within the city limits include several lizards and snakes. Many typical California resident and migratory birds have been observed in association with the remnant riparian, wetland, oak woodland, sage scrub, and grassland habitats. Urban-adapted common birds—such as American crow (*Corvus brachyrhynchos*), blackbirds, white-crowned sparrow (*Zonotrichia leucophrys*), California towhee (*Melozone crissalis*), juncos, house finch (*Haemorhous mexicanus*), house sparrow (*Passer domesticus*), and hummingbirds, depending upon plant species present to provide cover and food resources—likely inhabit golf courses and cemeteries where disturbance and perceived threats (e.g., dogs) are fewer. Mammal species known to occur include California ground squirrel (*Spermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), Botta's pocket gopher (*Thomomys bottae*), mice and voles, coyote (*Canis latrans*), and bobcat. Mountain lions are known to occur in the Cleveland National Forest and along the Santa Ana River corridor, and have been documented in the Temescal Valley near Trilogy Golf Club.

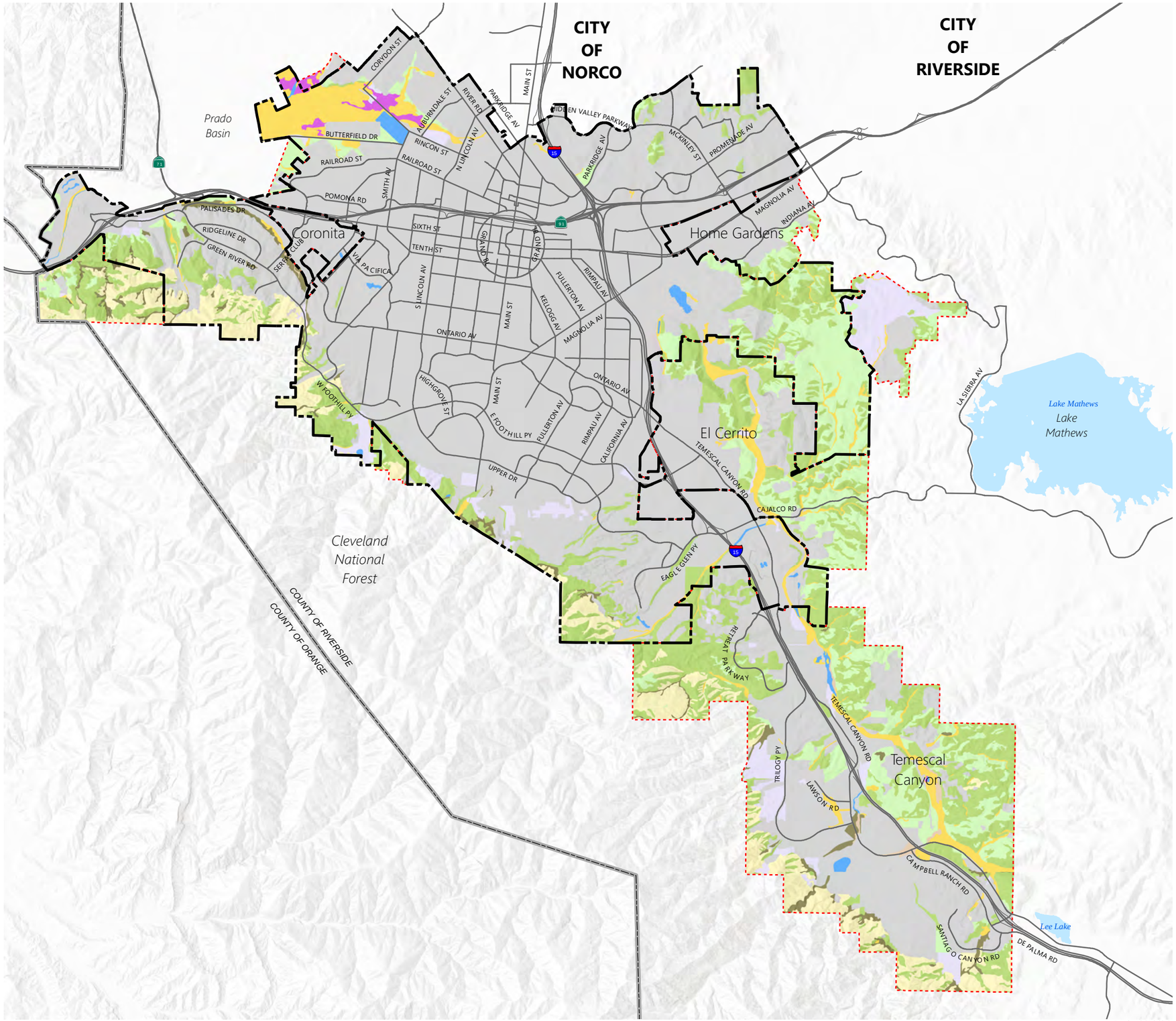


Figure 5.4-6

# VEGETATION

## Legend

- City Boundary
- Sphere of Influence Areas
- Agricultural Land
- Chaparral
- Coastal Sage Scrub
- Desert Scrub
- Developed/Disturbed Land
- Grassland
- Meadows and Marshes
- Montane Coniferous Forest
- No equivalent
- Playas and Vernal Pools
- Riparian Scrub, Woodland, Forest
- Riversidean Alluvial Fan Sage Scrub
- Water
- Woodland and Forests

*Source:*
*SCWA 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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There are large areas of open space around the City and SOI, including the Chino Hills State Park (to the northwest), Cleveland National Forest (to the southwest), Prado Basin (to the north), and the Lake Matthews Area (to the east). Wildlife movement between these areas is important. Generally, the city is developed, with minimal opportunities for wildlife movement through the city. However, the SOI has significantly more open space area suitable for wildlife habitat than the city. Figure 5.4-7, *Potential Wildlife Movement Corridors*, identifies potential wildlife movement between these large areas of open space in the City and SOI.

In the city, the few areas with natural characteristics that could be used by wildlife as movement or migratory corridors occur in orchards and along drainages. The most prominent features that may provide valuable habitat linkage are the Bedford Wash and Temescal Canyon Wash; together these two ephemeral drainages connect the Cleveland National Forest and the Lake Mathews Estelle Mountain Reserve. This potential corridor is labeled as the Bedford Wash to Lake Mathews Estelle Mountain Reserve Corridor. Some smaller mobile species may be able to use the channelized washes that bisect the city, particularly during the dry season. Within the City of Corona, there are no other notable wildlife movement and migratory corridors that link large areas of open space; however, there is potential value in establishing a corridor between the Chino Hills State Park and the Cleveland National Forest by circumventing SR-91. This highway poses a substantial barrier to wildlife movement between two large open spaces.

Most of the land in the western SOI is adjacent to the Cleveland National Forest, excluding the Coronita area. The entire southwestern border of the Temescal Canyon is adjacent to the Cleveland National Forest, and large parts of the southeastern border are adjacent to the Lake Mathews Estelle Mountain Reserve. The East Sphere, including El Cerrito, is adjacent to the Lake Mathews Estelle Mountain Reserve, which extends south to Lake Elsinore State Recreation Park. Aside from the Bedford Wash to Lake Mathews Estelle Mountain Reserve Corridor (which goes through the City and parts of the SOI), wildlife movement and migratory corridors in the SOI primarily occur due to their proximity to large areas of open space.

## 5.4.2 Thresholds of Significance

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

B-1 Have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

B-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

B-3 Have a substantial adverse effect on state or federally protected wetlands a (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

B-4 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.

B-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

B-6 Conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## 5.4.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential biological resources impacts as a result of implementation of the proposed project.

### Land Use Element

#### *Sphere of Influence*

- **LU-22.6** Upon an annexation proposal, a change in general plan land use designations, which may include the Open Space designation if not set aside for flood control, habitat conservation, or master planned use, would be fully analyzed for appropriate alternate land use designations, which are required to mitigate all identified environmental and infrastructure impacts associated with the proposed land use change.

- **LU-22.12** Maintain the existing mix of developed residential, commercial, open space, and related uses in Coronita.

### Community Design Element

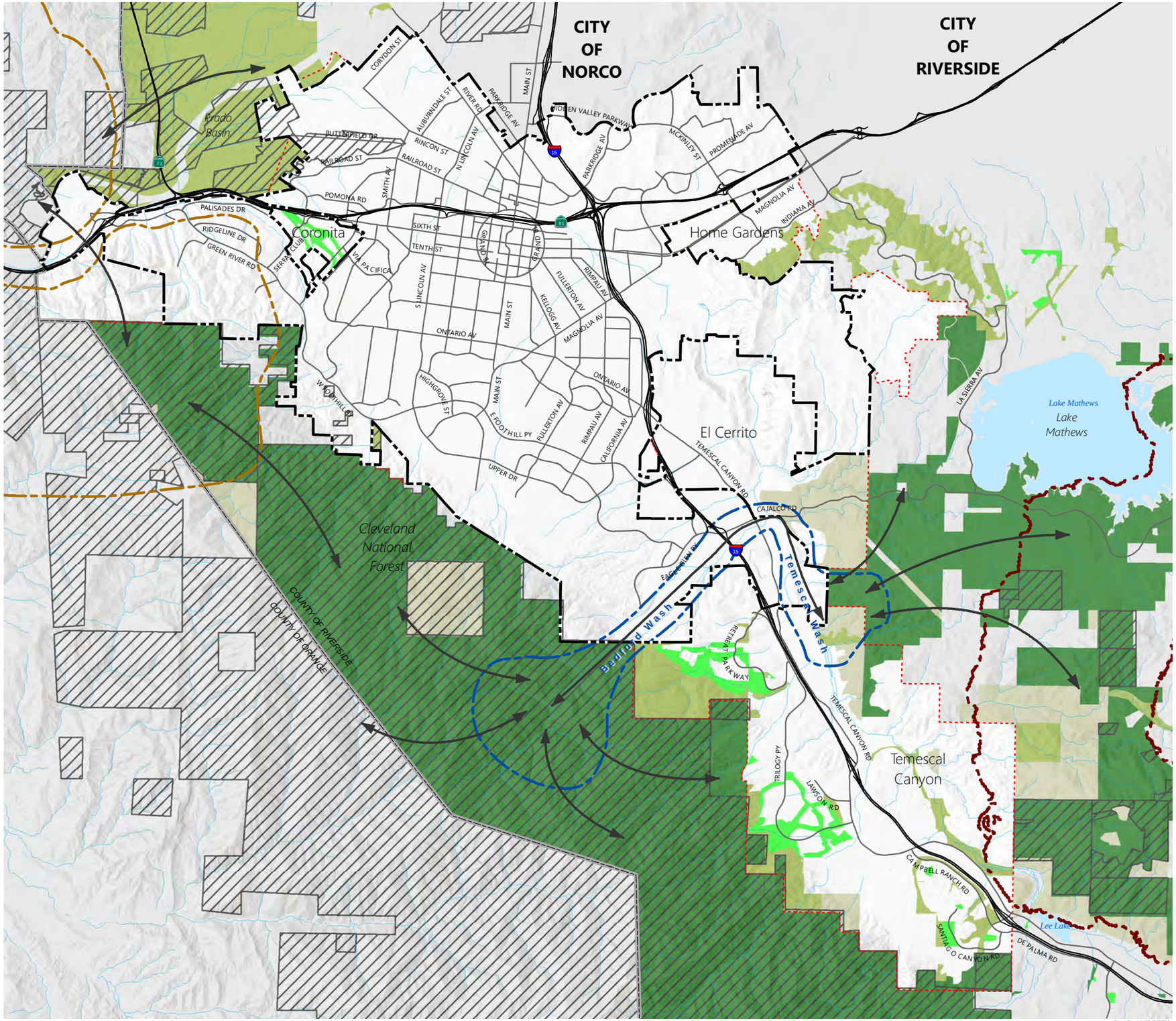
#### *Trails and Greenways*

- **CD-4.1** Develop a plan and implement improvements that visually and physically interconnect the City's parklands and link these and residential neighborhoods with the Cleveland National Forest, and other open spaces. This may be accomplished by the installation of a continuous corridor of trees, plantings, informational signage, trails, and/or other defining elements along streets that connect the parks and open spaces or new corridors, where feasible.

- **CD-4.2** New development adjoining open spaces, washes or have the ability to provide pedestrian connections to off-site trails or pathways should be designed to ensure landscape transitions and compatibility with these resources. Such improvements should be designed to provide adequate flood protection for adjoining properties.

Figure 5.4-7

# POTENTIAL WILDLIFE MOVEMENT CORRIDORS




Date Saved: 10/8/2019

## Legend

- City Boundary
- Sphere of Influence Areas

**Essential Connectivity Areas Corridors**

- Bedford Wash to Lake Mathews Estelle Mountain Reserve Corridor
- Discontiguous: CNF - Santa Ana Mountains
- Estelle Mountain - Lake Matthews
- State Managed Area
- Conservation
- Conservation Habitat
- Open Space Recreation
- Open Space Rural
- Wildlife Movement
- Streams and Rivers

*Source:*
*SCWA 2017*

CORONA
General Plan
EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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### *Visual Resources*

- **CD-6.4** Require that projects be designed and sited to maintain the natural topographic, physiographic, and aesthetic viewshed characteristics of those features, utilizing the following conditions:

  - Minimize the area and height of cuts and fills to the extent technically achievable, ensuring that slope tops and bottoms are rounded and facilitate a smooth and seamless transition where natural and built slopes intersect.

  - Configure development sites to mimic predevelopment natural topography by clustering sites and individual units and avoiding extensive fragmentation of steep slopes, "stair stepping" and varying terraces of structures, and/or other design practices.

  - Minimize the size of flat development pads in site grading to that necessary to accommodate the building footprint, a reasonable amount of useable outdoor space, and structural and site stability.

  - Encourage building architectural design styles, forms and shapes, materials, and building siting to complement rather than visually dominate their landscape setting.

  - Minimize the height of retaining walls, and design with smooth flowing forms that follow topography and with material colors and textures that blend in with the surrounding landscape.

  - Plant hillside and canyon slopes with natural species of drought-tolerant plants to soften the visual impact of land grading, retaining walls, structures, and roads and maintain (to the extent feasible) natural vegetation.

  - Restore disrupted vegetation, wildlife habitat, natural water courses, drainage swales, and other important viewshed features. Vegetation should be arranged in informal masses to create a textured slope characteristic of natural chaparral mountain slope terrain.

## Environmental Resources Element

### *Water Resources*

- **ER-4.1** Require urban uses to have a sufficient distance from a floodway boundary to ensure adequate protection of life, property, and habitat values.

- **ER-4.2** Avoid altering floodways or channelization wherever possible; however, limit alterations to those that meet the following criteria:

  - Alterations necessary for the protection of public health and safety only after all other options are exhausted

  - Alterations essential to public service projects where no other feasible construction method or alternative project location exists

  - Projects where the primary function is the improvement of fish and wildlife habitats

- **ER-4.3** Design alterations and improvements to floodways so that they avoid adverse environmental effects to the maximum extent feasible, considering the following environmental factors:
  - Stream scour
  - Erosion protection and sedimentation
  - Wildlife habitat and linkages
  - Groundwater recharge capability
  - Adjacent property
  - Natural designs (e.g., soft riparian bottoms and gentle bank slopes, and landscaping with native plants
- **ER-4.4** Preserve and enhance existing native riparian habitat and prevent obstruction of natural watercourses to the extent feasible in new private and public developments or implement on-site replacement as mitigation.
- **ER-4.5** Allow variances from city development standards on land area restricted from development due to its retention as a natural floodway, floodplain, or watercourse to encourage the preservation of natural watercourses without creating undue hardship on property owners.
- **ER-5.1** Prohibit encroachment of development into wetlands; provide buffer zones, setbacks, or other effective techniques in project siting and design to minimize direct and indirect effects to wetland habitats.
- **ER-5.2** During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.
- **ER-5.3** Ensure compliance with habitat mitigation plans accepted by the applicable state and federal regulatory agencies that meet established ratios for wetland enhancement/restoration and on-/off-site compensation for the loss of wetland functions and values.
- **ER-5.4** Consider wetlands for use as natural water treatment areas that will result in improvement of water quality.
- **ER-5.5** Prohibit the planting of invasive, nonnative species in areas that would encroach and affect watercourses, their banks, and riparian areas.

### *Biological Resources*

- **ER-6.1** Support the rehabilitation and enhancement of the biological diversity, and integrity of the City's natural resources through such means as vegetation restoration, control of alien plants and animals, landscape buffering, and natural watercourse channel restoration.

- **ER-6.2** Preserve the wildlife and plant species and habitats listed in Tables 4-12 and 4-13 of the Technical Background Report for the General Plan and EIR and those that may be considered by the City of Corona in the future.

- **ER-6.3** Ensure that new developments demonstrate compliance with state and federal regulations concerning the status, location, and condition of significant and sensitive biological species and habitats and riparian and riverine corridors. Biological surveys, as required and defined by the Western Riverside County Multiple Species Habitat Conservation Plan, should identify potential impacts on biological resources and include mitigation measures to protect/replace resources in like kind.

- **ER-6.4** Ensure that new developments through the development review process adhere to the Western Riverside County Multiple Species Habitat Conservation Plan, the Stephens' Kangaroo Rat Habitat Conservation Plan, and other habitat plans as appropriate to conserve biological diversity through protection of natural communities.

- **ER-6.5** Preserve wildlife habitat of significant natural open space areas, including expanding habitat ranges, movement corridors, and nesting sites by setting aside lands between open space areas for biological linkages. Biological habitat linkages may include the use of riparian corridors, open space dedications, development of parks and/or natural resources, or greenbelts. Any proposed recreational use of those areas such as trails shall be designed to strictly avoid damaging sensitive habitat area.

- **ER-7.1** Require that public and private construction activities be conducted in a manner to minimize adverse impacts on natural resources and biological resources through the use of best management practices established by the City of Corona and appropriate county, regional, state, and federal regulatory agencies.

- **ER-7.2** Allow for publicly accessible sites that facilitate observation of natural resources in Corona and its sphere without compromising environmental quality.

- **ER-7.3** Promote education programs and materials prepared by the Western Riverside County Regional Conservation Authority, Riverside-Corona Resource Conservation District, and other entities that promote awareness of biological resources conservation.

- **ER-8.1** Cooperate with federal and state agencies to achieve the sustainable conservation of forest lands as a means of providing open space and protecting natural resources and MSHCP habitat.

- **ER-8.2** Support conservation programs to reforest privately held forest lands.

- **ER-8.3** Work with Riverside County to update the Vegetation Map for Corona and the SOI areas in cooperation with the California Department of Fish and Wildlife, the Natural Diversity Data Base, the United States Forest Service, and other knowledgeable agencies.

- **ER-8.4** Maintain and conserve superior examples of native trees (including oak trees), natural vegetation, stands of established trees, and other features for aesthetic and water conservation purposes.

- **ER-8.5** Conserve the oak tree resources in the City to the extent feasible.

- **ER-9.1** Protect sensitive biological resources in the Temescal Canyon Area Plan through adherence to policies in the Western Riverside County MSHCP.

- **ER-9.2** Conserve existing wetlands and wetland functions and values in the Temescal Canyon Wash, Prado Basin, and the Santa Ana River with a focus on conservation of existing riparian, woodland, coastal sage scrub, alluvial fan scrub, and open water habitats.

- **ER-9.3** Conserve existing known populations of least Bell's vireo and southwestern willow flycatcher in the Temescal Canyon Area Plan, including at Prado Basin, Santa Ana River, and Temescal Canyon Wash. Maintain existing breeding habitat for these species at Prado Basin, Santa Ana River, and Temescal Wash where applicable to a particular project and location.

- **ER-9.4** Conserve and manage suitable habitat for species known to exist in the Temescal Canyon Area Plan of Western Riverside County's Multiple Species Habitat Conservation Plan.

- **ER-9.5** Conserve clay soils supporting sensitive plant species known to occur in the Temescal Canyon area, including Munz's onion, Palmer's grappling hook, small-flowered morning glory, long-spined spineflower, thread-leaved brodiaea, small-flowered microseris, and many-stemmed dudleya.

- **ER-9.6** Conserve sandy soils co-occurring with chaparral supporting Palomar monkeyflower, known to occur in the Temescal Canyon area.

- **ER-9.7** Conserve locations supporting California muhly, heart-leaved pitcher sage, Hall's monardella, and other sensitive plant species that may occur in a wide variety of habitat types within the Temescal Canyon Area Plan.

- **ER-9.8** Provide for and maintain connection(s) from the Cleveland National Forest to Prado Basin and the Santa Ana River within Temescal Canyon, providing opportunities for offsite connections to Chino Hills State Park.

- **ER-9.9** Conserve upland habitat adjacent to the Temescal Canyon Wash to augment existing upland habitat conservation in the Lake Matthews/Estelle Mountain Reserve areas and provide for contiguous connection of upland habitat blocks from the existing reserve to Temescal Wash. Habitat conservation should focus on blocks of existing upland habitat east of Temescal Canyon Wash connecting to Lake Matthews/Estelle Mountain Reserve.

- **ER-9.10** Conserve floodplain areas supporting sensitive plant species known to occur in Temescal Canyon, including Parry's spineflower, peninsular spineflower, smooth tarplant, and Coulter's matilija poppy.

- **ER-9.1I** Conserve rocky soils co-occurring with coastal sage scrub, peninsular jumper, or chaparral supporting Payson's jewelflower, known to occur in the Temescal Canyon area.

- **ER-9.12** Provide for and maintain a continuous linkage along the Temescal Canyon Wash from the southern boundary of the Temescal Canyon to the Santa Ana River.

## 5.4.4 Environmental Impacts

### 5.4.4.1 METHODOLOGY

The biological assessment is based on a desktop review of available literature, aerial photos, and other publicly available maps, and searches of online databases containing information on natural resources. Data sources include background materials for the MSHCP, updated reports published online by the Regional Conservation Authority, and standard biological reference sources, described below. Database searches encompassed the entire project area in order to provide regional context, and ensure thorough review of potential biological resources within the project area.

#### *Database and Literature Reviews*

The reported occurrence of special status flora, fauna, and plant communities were discovered from the CDFW California Natural Diversity Database (CNDDB) RareFind 5 and the CNPS Online Inventory of Rare and Endangered Plants. The study area included the eight U.S. Geological Survey (USGS) quadrangles encompassing the City of Corona and its SOI: Prado Dam, Corona North, Riverside West, Black Star Canyon, Corona South, Lake Mathews, Alberhill, and Santiago Peak.

Additional reference sources included:

- State and Federally Listed Endangered, Threatened Animals and California Species of Special Concern
- State and Federally Listed Endangered, Threatened and Rare Plants of California
- USFWS Critical Habitat Portal (web based)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California

### 5.4.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.4-1: Buildout of the proposed Land Use Plan could impact sensitive species plant and animal species known to occur in the City of Corona. [Threshold B-1]**

## General Plan

Several large areas of open space with biological conservation resources surround the City and SOI, including Chino Hills State Park, Cleveland National Forest, Lake Mathews Estelle Mountain Reserve, and Prado Basin (see Figure 5.4-2). These large areas support a variety of plants and animals native to California. In addition to these permanently conserved open space areas, there is habitat in the city that supports sensitive species (see Figure 5.4-6). A large proportion of the city is highly urbanized and provides minimal habitat value for sensitive and special status species. However, much of the SOI is undeveloped and includes areas with agriculture and natural vegetation. Less-developed areas of the City and SOI that are currently open space, water features, or under agricultural use have the potential to support native species and natural communities. Urbanized areas typically do not have the potential to support biological resources. Figure 5.4-8, *Biological Resources Sensitivity*, shows the less-developed areas where biological resources are likely to be concentrated.

In addition, Figure 5.4-3, *Designated Critical Habitat in the City and SOI*, identifies critical habitat for five species within or adjacent to the City and SOI (least Bell's vireo, western yellow-billed cuckoo, southwestern willow flycatcher, Santa Ana sucker, and the coastal California gnatcatcher) near the Prado Basin, Chino Hills State Park, and along the foothills of the Cleveland National Forest.

Future development in accordance with the proposed land use plan may replace existing vacant or undeveloped lands in the City and SOI with developed land uses or redevelop existing uses. Potential land covers that could contain sensitive habitat for biological species are open space areas, vacant urban land, and agricultural land. The General Plan Update allows for development on vacant urban land and agricultural land, which could potentially include sensitive biological resources in the City and SOI. Additionally, six sensitive natural communities (Southern California Arroyo Chub/Santa Ana Sucker Stream, Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Riparian Forest, and Southern Sycamore Alder Riparian Woodland, and Southern Willow Scrub) have CNDDB records within the City and SOI. The records for these sensitive communities are along the edges of the City and SOI; however, it is possible that the communities extend further into the city than is documented, and records that lie outside the city may extend into the boundary. All of the sensitive communities documented within the study area are associated with valuable habitat for wildlife, and in some cases may contribute to wildlife movement. Therefore, implementation of the General Plan Update could impact areas of previously undisturbed habitat.

Buildout of the City and SOI in accordance with the General Plan Update could impact sensitive natural communities (see Table 5.4-1), sensitive plants (see Table 5.4-2), and sensitive animal species (see Table 5.4-3) in the city. Based on the CNDDB search of historical data, 64 special status plant species and 59 special status wildlife species are known to occur within the City or SOI. The City's environment is not static and may change over time as a result of development, fire, climate change, and other environmental factors. Therefore, other vegetation communities may become sensitive and/or species may be listed in the future.

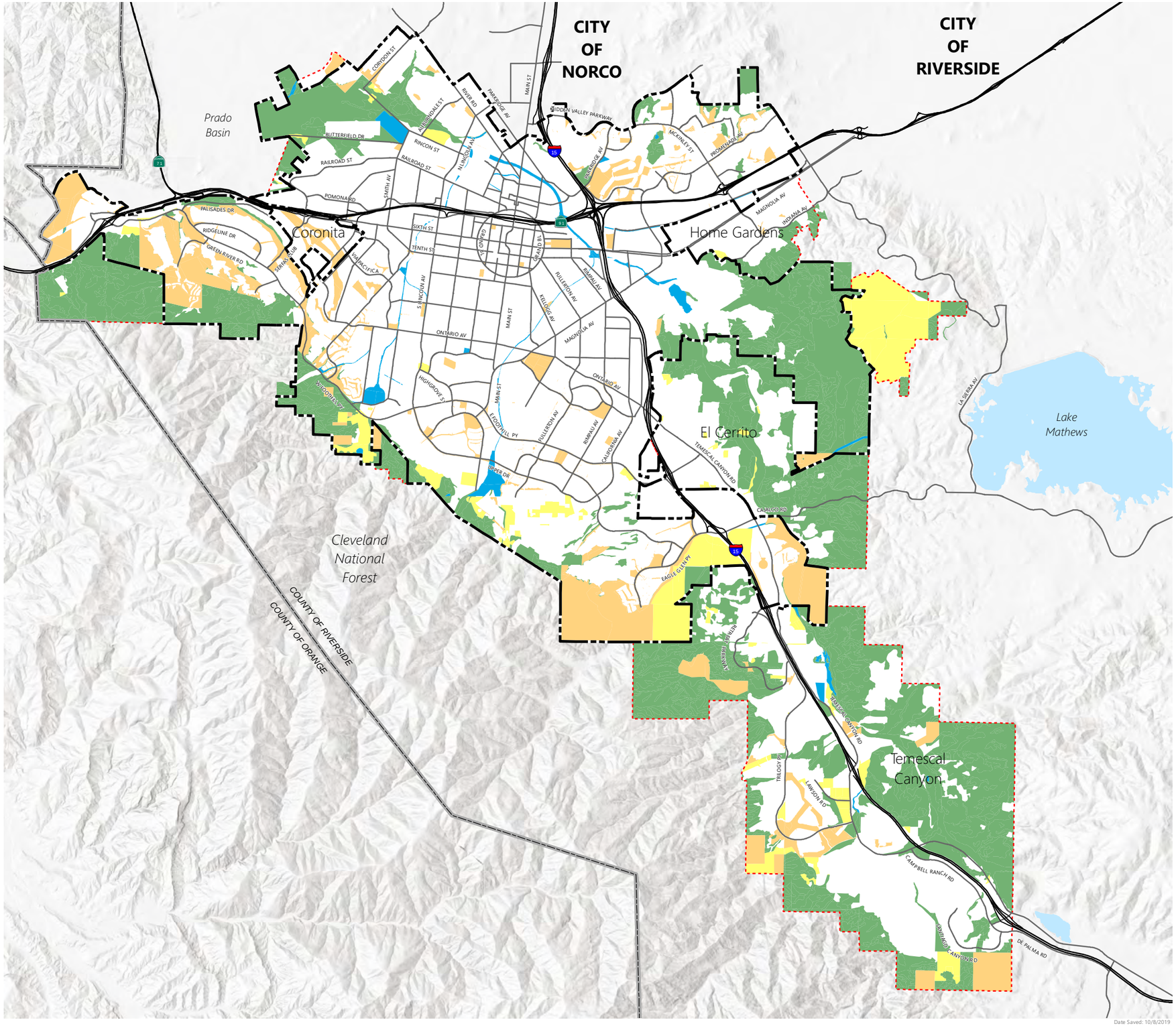


Figure 5.4-8

# BIOLOGICAL RESOURCES SENSITIVITY

## Legend

- City Boundary
- Sphere of Influence Areas
- Agriculture
- Open Space Recreation
- Vegetation
- Water

Source:
SCWA 2017

Date Saved: 10/8/2019

CORONA
General Plan
EIR

PLACEWORKS

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Local, state, and federal agencies regulate sensitive biological resources and require an assessment of their presence or potential presence in the project vicinity prior to the approval and construction of a proposed development project. These assessments would be conducted for all sensitive vegetation communities and special status species that have the potential to occur within or immediately adjacent to a proposed development project site under the General Plan Update.

The proposed General Plan Environmental Resources Element identifies several goals and policies to reduce impacts to Corona's diverse biological resources, including the following:

- **ER-6.1** Support the rehabilitation and enhancement of the biological diversity, and integrity of the City's natural resources through such means as vegetation restoration, control of alien plants and animals, landscape buffering, and natural watercourse channel restoration.

- **ER-6.2** Preserve the wildlife and plant species and habitats listed in Tables 4-12 and 4-13 of the Technical Background Report for the General Plan and EIR and those that may be considered by the City of Corona in the future.

- **ER-6.4** Ensure that new developments through the development review process adhere to the Western Riverside County Multiple Species Habitat Conservation Plan, the Stephens' Kangaroo Rat Habitat Conservation Plan, and other habitat plans as appropriate to conserve biological diversity through protection of natural communities.

The following policy requires proposed development projects to conduct biological assessments to determine if sensitive biological resources and wildlife corridors would be impacted and to adopt a process and mitigation regulations for potential resource impacts, as required by USFWS and CDFW:

- **ER-6.3** Ensure that new developments demonstrate compliance with state and federal regulations concerning the status, location, and condition of significant and sensitive biological species and habitats and riparian and riverine corridors. Biological surveys, as required and defined by the Western Riverside County Multiple Species Habitat Conservation Plan, should identify potential impacts on biological resources and include mitigation measures to protect/replace resources in like kind.

In addition, the City is a participant in the Western Riverside MSHCP. The MSHCP provides a framework for the USFWS and CDFW to grant take authorization (i.e., incidental take permits) for species covered by the MSHCP that are FESA and/or CESA listed as threatened or endangered. Approval of the MSHCP and execution of the implementing agreement by the USFWS and CDFW allow the agencies to issue Take Authorizations, including the City of Corona. Implementation of land use decisions consistent with the MSHCP without project-by-project review and permitting by USFWS and CDFW. However, mitigation for impacts to both listed and unlisted species would be required pursuant to CEQA or other regulatory processes, and the MSHCP's Conservation Area provides an avenue for this mitigation.

In addition to the MSHCP, there is a long-term (30-year) HCP for Stephens' kangaroo rat (*Dipodomys stephensi*). The HCP is administered by the Riverside County Habitat Conservation Agency. While the core reserves established by the Stephens' kangaroo rat HCP are managed as part of the MSHCP Conservation

Area, the Stephens' kangaroo rat HCP still provides take authorization for Stephens' kangaroo rat within its boundaries. The MSHCP provides take authorization outside of the area already covered by the Stephens' kangaroo rat HCP. Projects in the eastern and southern portions of the City and SOI would also comply with the HCP for the Stephan's kangaroo rat.

While adherence to the MSHCP, Stephen's Kangaroo Rat HCP, and the City's policies protecting biological resources would assist in reducing impacts, under the CESA and FESA, future development projects would require more detailed evaluations of biological resources and formulation of mitigation measures, if needed, by a qualified biologist. Consequently, impacts to sensitive plant and animal species are considered potentially significant.

### Climate Action Plan

The update to the City's Climate Action Plan (CAP) focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect biological resources in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to biological resources.

**Impact 5.4-2: Implementation of the proposed General Plan Update could impact sensitive natural communities, including wetlands and riparian habitat. [Threshold B-2 (part)]**

### General Plan

There are several ephemeral washes that traverse the City and SOI, generally originating in the mountainous areas of the Cleveland National Forest to the southwest of the City and flowing northerly toward the Santa Ana River basin, including Temescal Canyon Wash, Bedford Canyon Wash, Joseph Canyon Wash, Main Street Wash, and Mabey Canyon Wash (see Figure 5.4-5, *Drainages and Associated Riparian Vegetation Communities*). In addition, artificial (created) lakes and ponds are present at Lake Temescal (southeast of the interchange of SR-91 and I-15), Border Lake (near Brentwood Park), and at the City's golf courses.

Wetlands and riparian habitats within the undisturbed habitat may include those mapped on Figure 5.4-5, and include freshwater lakes/ponds, creeks, washes, aquifers, and other blue-line streams. Specifically, these water resources may support biological resources, including riparian vegetation and associated wildlife species. A CNDDB query identified 12 special status natural communities that occur within the study area, as shown in Table 5.4-1, *Sensitive Natural Communities in the Study Area*. Six sensitive habitats have CNDDB records within the City and SOI. These habitats include Southern California Arroyo Chub/Santa Ana Sucker Stream, Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Riparian Forest, Southern Sycamore Alder Riparian Woodland, and Southern Willow Scrub. All of the sensitive communities documented in the study area are associated with ephemeral or perennial water features, such as streams and washes.

As described in the analysis for Impact 5.4-1, the goals and policies under the Environmental Resources Element would help conserve, protect, and manage Corona's biological resources, including natural and open

space areas, habitats, hillsides, and wildlife. Specifically, Policy ER-9.2 would ensure that the City conserves existing wetlands and wetland functions.

However, implementation of the General Plan policies would not completely avoid impacts on wetlands and riparian resources. Future site-specific projects built in accordance with the General Plan Update could potentially impact these sensitive riparian habitats and may be required to create or restore on-site or off-site habitat as a condition of allowing impacts to sensitive species. To determine site-specific impacts and necessary mitigation, future projects would require more detailed evaluations of biological resources. Therefore, impacts are potentially significant.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect biological resources in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to biological resources habitat.

**Impact 5.4-3: Buildout of the proposed project could impact undetermined amounts of wetlands and jurisdictional waters regulated by the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Santa Ana Regional Water Quality Control Board. [Threshold B-2 (part) and Threshold B-3]**

### General Plan

Development in accordance with the General Plan Update could impact waters and wetlands jurisdictional to the CDFW, Corps, and Santa Ana RWQCB. Waters of the United States are jurisdictional to the Corps; Waters of the State are jurisdictional to the Santa Ana RWQCB and the CDFW; and wetlands meeting certain criteria are jurisdictional to the Corps and/or the CDFW.

As mapped on Figure 5.4-5, *Drainages and Associated Riparian Communities*, the City of Corona has a number of potential wetlands and riparian habitats that may be regulated by the Corps, CDFW, and/or Santa Ana RWQCB pursuant to several federal and state regulations. These include freshwater lakes/ponds, creeks, washes, aquifers, and other blue line streams. The proposed Environmental Resources Element includes goals and policies that minimize potential impacts to jurisdictional waters and wetlands for future development within Corona.

- **ER-5.1** Prohibit encroachment of development into wetlands; provide buffer zones, setbacks, or other effective techniques in project siting and design to minimize direct and indirect effects to wetland habitats.

- **ER-5.2** During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.

- **ER-5.3** Ensure compliance with habitat mitigation plans accepted by the applicable state and federal regulatory agencies that meet established ratios for wetland enhancement/restoration and on-/off-site compensation for the loss of wetland functions and values.

- **ER-5.4** Consider wetlands for use as natural water treatment areas that will result in improvement of water quality.

- **ER-5.5** Prohibit the planting of invasive, nonnative species in areas that would encroach and affect watercourses, their banks, and riparian areas.

- **ER-9.2** Conserve existing wetlands and wetland functions and values in the Temescal Canyon Wash, Prado Basin, and the Santa Ana River with a focus on conservation of existing riparian, woodland, coastal sage scrub, alluvial fan scrub, and open water habitats.

Future development in accordance with the proposed General Plan Update could impact jurisdictional waters and/or wetlands directly (e.g., building over the jurisdictional resources by filling the land) or indirectly (e.g., increased stormwater drainage or runoff into nearby jurisdictional waters). Thus, a more site-specific biological assessment would be required to protect waters on-site. A jurisdictional delineation may also be required by CDFW if there is potential riparian habitat onsite. If the assessment identified jurisdictional resources on-site, mitigation measures for impacts to jurisdictional waters, wetlands, and/or riparian habitat would be required. Thus, impacts are considered potentially significant.

### Climate Action Plan

The update to the CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect biological resources in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to wetlands.

**Impact 5.4-4: Development pursuant to the proposed General Plan Update could adversely impact wildlife movement in the Bedford Wash to Lake Mathews Estelle Mountain Reserve Corridor. [Threshold B-4 (part)]**

### General Plan

The primary wildlife movement and migratory corridors are features that link large areas of open space. There are large areas of open space around the City and SOI, including the Chino Hills State Park, Cleveland National Forest, Prado Basin, and the Lake Matthews Area.

Generally, the City is developed, with minimal opportunities for wildlife movement through the city. However, the SOI has significantly more open space area suitable for wildlife habitat. Figure 5.4-7, *Potential Wildlife Movement Corridors*, identifies potential wildlife movement between these large areas of open space in the City and SOI. The MSHCP describes potential wildlife linkages in the City, as follows:

- **Temescal Canyon Area Plan, Subunit 1 (Santa Ana River to Santa Ana Mountains) and Subunit 2 (Prado Basin):** Connects the Prado Basin and the Santa Ana River to Chino Hills State Park.

- **Temescal Canyon Area Plan, Subunit 3 (Temescal Wash West).** Connects the Temescal Canyon Wash from the southern boundary of the Temescal Area Plan to the Santa Ana River. It is recognized that the connection from the northern boundary of the Criteria Area along the Temescal Canyon Wash to the Santa Ana River generally consists of a concrete channel.

- **Temescal Canyon Area Plan, Subunit 4 (La Sierra Hills/Lake Mathews-West).** Connects the eastern edge of the Temescal Canyon Wash to the existing Lake Mathews/Estelle Mountain Reserve.

- **Temescal Canyon Area Plan, Subunit 5 (Temescal/Santa Ana Mountains).** Connects the eastern edge of the Temescal Canyon Wash to the Santa Ana Mountains.

In addition to these linkages identified in the MSHCP, open spaces areas within the built environment of the City and SOI provide refuge for some wildlife species, particularly birds and small animals such as lizards and butterflies. Golf courses, parks, and cemeteries typically have mature trees and may have water features, both important elements that provide food and cover for wildlife. Orchards and some other types of agricultural land uses may also offer some habitat value. However, the most prominent features that may provide valuable habitat linkage in the City and SOI are the Bedford Wash and the Temescal Canyon Wash; together these two ephemeral drainages connect the Cleveland National Forest and the Lake Mathews Estelle Mountain Reserve. This wildlife movement corridor is known as the Bedford Wash to Lake Mathews Estelle Mountain Reserve Corridor.

Within the City of Corona, there are no additional notable wildlife movement and migratory corridors that link large areas of open space, but there is potential value in establishing a corridor between the Chino Hills State Park and the Cleveland National Forest by circumventing SR-91. However, this highway poses a substantial barrier to wildlife movement between these two large open spaces.

Future development in accordance with the proposed General Plan Update could disrupt the wildlife linkages described above. As noted above, SR-91 is already a major impediment to wildlife movement between Chino Hills State Park and Cleveland National Forest. Future developments such as large, planned residential communities, business parks, or major roadways may obstruct existing local wildlife linkages and impede wildlife movement in the Bedford Wash to Lake Estelle Mountains Reserve Corridor. The Environmental Resources Element identifies several policies to reduce impacts to wildlife movement:

- **ER-4.2** Avoid altering floodways or channelization wherever possible; however, limit alterations to those that meet the following criteria:

    - Alterations necessary for the protection of public health and safety only after all other options are exhausted

    - Alterations essential to public service projects where no other feasible construction method or alternative project location exists

- Projects where the primary function is the improvement of fish and wildlife habitats

- **ER-4.3** Design alterations and improvements to floodways so that they avoid adverse environmental effects to the maximum extent feasible, considering the following environmental factors:
  - Stream scour
  - Erosion protection and sedimentation
  - Wildlife habitat and linkages
  - Groundwater recharge capability
  - Adjacent property
  - Natural designs (e.g., soft riparian bottoms and gentle bank slopes, and landscaping with native plants

- **ER-6.2** Preserve the wildlife and plant species and habitats listed in Tables 4-12 and 4-13 of the Technical Background Report for the General Plan and EIR and those that may be considered by the City of Corona in the future.

- **ER-6.5** Preserve wildlife habitat of significant natural open space areas, including expanding habitat ranges, movement corridors, and nesting sites by setting aside lands between open space areas for biological linkages. Biological habitat linkages may include the use of riparian corridors, open space dedications, development of parks and/or natural resources, or greenbelts. Any proposed recreational use of those areas such as trails shall be designed to strictly avoid damaging sensitive habitat area.

Despite adherence to the General Plan policies, development within the City could still interfere with the regional and local wildlife movement connections. As stated above, future projects considered for approval by the City would require biological resources assessments of each respective project site by a qualified biologist. Mitigation measures would be required if impacts to wildlife movement and/or migration are identified. Consequently, impacts to wildlife movement are considered potentially significant in the absence of further biological assessment.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not result in development of new residential and nonresidential land uses and would not affect biological resources in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to wildlife movement.

**Impact 5.4-5: Migratory birds known to occur within the City of Corona and SOI would be protected under the Migratory Bird Treaty Act. [Threshold B-4 (part)]**

## General Plan

A number of migratory bird species are known to occur within the City (see Table 5.4-3). Buildout of the proposed project could impact these migratory birds through future development and removal of vegetation that could be used for nesting.

The Migratory Bird Treaty Act administered by the USFWS governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations. In addition, California law, particularly relevant statutes in the Fish and Game Code (FGC), provide protections for birds and their active nests by prohibiting the:

- Take a bird, mammal, fish, reptile, or amphibian (FGC § 2000).
- Take, possess, or needlessly destroy the nest or eggs of any bird (FGC § 3503).
- Take, possess, or destroy any bird of prey in the orders Strigiformes (owls) and Falconiformes (such as falcons, hawks and eagles) or the nests or eggs of such bird (FGC § 3503.5).
- Take or possess any of the 13 fully protected bird species listed in FGC § 3511.
- Take any nongame bird (i.e., bird that is naturally occurring in California that is not a game bird, migratory game bird, or fully protected bird) (FGC § 3800).
- Take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such bird, except as provided by rules or regulations adopted by the Secretary of the Interior under the Migratory Bird Treaty Act (FGC § 3513).
- Take, import, export, possess, purchase, or sell any bird (or products of a bird), listed as an endangered or threatened species under the California Endangered Species Act unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW. (FGC §§ 2050 et seq.)

Additional mitigation requiring preconstruction general nesting bird surveys is provided to ensure that active nests and suitable nesting habitats are not impacted during the general avian breeding season. Impacts to migratory birds are considered potentially significant in the absence of mitigation.

## Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect biological resources in

the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to migratory birds.

**Impact 5.4-6: Future projects in accordance with the General Plan Update would be required to comply with the Western Riverside Multi-Species Habitat Conservation Plan, the Stephen's Kangaroo Rat Habitat Conservation Plan, and Corona's local biological resources policies and ordinances. [Thresholds B-5 and B-6]**

## General Plan

### *Western Riverside MSHCP*

The City is a participant in the Western Riverside County MSHCP, a comprehensive, multi-jurisdictional plan that addresses biological and ecological diversity by conserving species and associated habitats while allowing approval of development in western Riverside County (Riverside County 2003). It is administered by the Regional Conservation Authority. The MSHCP requires that individuals, businesses, or public agencies proposing development in the "criteria area" of the MSHCP (see Figure 5.4-1) obtain approval from the Regional Conservation Authority and a permit from the local responsible agency. Criteria areas include the cell groups described below. Projects that are approved must pay fees for review and construction of the project in accordance with municipal code Chapter 16.33, Multiple Species Habitat Conservation Plan (MSHCP) Mitigation Fee.

### *Stephen's Kangaroo Rat HCP*

In addition to the MSHCP, a long-term (30-year) HCP for Stephens' kangaroo rat is administered by the Riverside County Habitat Conservation Agency. While the core reserves established by the HCP are managed as part of the MSHCP Conservation Area, the Stephens' kangaroo rat HCP still provides take authorization within its own boundaries. The MSHCP provides take authorization for Stephens' kangaroo rat within the MSHCP area but outside the HCP. Projects in the eastern and southern portions of the City and SOI would also comply with the HCP for the Stephan's kangaroo rat (see Figure 5.4-1).

### *Local Ordinances Protecting Biological Resources*

Chapter 12.22, Community Forestry Program, of the Corona Municipal Code recognizes, designates, and protects landmark trees. Pursuant to the municipal code, the City Council can designate a tree as a "landmark tree" on City property if it meets certain criteria adopted by resolution of the council. The municipal code restricts permanent removal of landmark trees except in emergency situations. Implementation of the General Plan Update would not conflict with this local ordinance.

### *Summary*

Buildout of the proposed General Plan Update could impact biological resources in the City and SOI. However, compliance with MSHCP, the Stephen's kangaroo rat HCP, and the City's municipal code would protect these resources. These policies would also protect these resources:

- **ER-6.4** Ensure that new developments through the development review process adhere to the Western Riverside County Multiple Species Habitat Conservation Plan, the Stephens' Kangaroo Rat Habitat Conservation Plan, and other habitat plans as appropriate to conserve biological diversity through protection of natural communities.

- **ER-9.4** Conserve and manage suitable habitat for species known to exist in the Temescal Canyon Area Plan of Western Riverside County's Multiple Species Habitat Conservation Plan.

Implementation of the General Plan Update would not conflict with an adopted habitat conservation plan, natural community conservation plan, or local ordinance. Therefore, impacts are less than significant

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect biological resources in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to local biological resources ordinances and habitat conservation plans.

## 5.4.5 Existing Regulations and Standard Conditions

### Federal

- Federal Endangered Species Act (FESA)
- Clean Water Act, Sections 401, 402, and 404
- Migratory Bird Treaty Act
- Bald and Golden Eagle Protection Act

### State

- California Endangered Species Act (CESA)
- Native Plant Protection Act
- California Desert Native Plants Act
- California Porter-Cologne Water Quality Act

### Regional

- Western Riverside Multi-Species Habitat Conservation Plan (MSHCP)
- Stephen's Kangaroo Rat Habitat Conservation Plan

### Local

- Corona Municipal Code, Chapter 16.33, Multiple Species Habitat Conservation Plan (MSHCP) Mitigation Fee.
- Corona Municipal Code, Chapter 12.22, Community Forestry Program.

## 5.4.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.4-6.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.4-1** Sensitive plant and animal species known to occur within the City of Corona or SOI could be adversely impacts by development in accordance with the General Plan.
- **Impact 5.4-2** Buildout of the General Plan Update could potentially impact the wetlands and riparian resources in the City and SOI.
- **Impact 5.4-3** Development pursuant to the proposed project may impact waters and wetlands jurisdictional to the Corps, CDFW or Santa Ana RWQCB.
- **Impact 5.4-4** Development pursuant to the proposed General Plan Update could adversely impact wildlife movement in the Bedford Wash to Lake Mathews Estelle Mountain Reserve Corridor.
- **Impact 5.4-5** Migratory birds known to occur in the Corona area could be adversely impacted during construction activities.

## 5.4.7 Mitigation Measures

### Impact 5.4-1

BIO-1 Applicants for future development projects shall include a biological resources survey. The biological resources survey shall be conducted by a qualified biologist. The biological resources survey shall include, but not be limited to:

- An analysis of available literature and biological databases, such as the California Natural Diversity Database, to determine sensitive biological resources that have been reported historically from the proposed development project vicinity.
- A review of current land use and land ownership within the proposed development project vicinity.
- An assessment and mapping of vegetation communities present within the proposed development project vicinity.
- An evaluation of potential local and regional wildlife movement corridors.
- A general assessment of potential jurisdictional areas, including wetlands and riparian habitats.

**Habitat Assessment**. If the proposed development project site supports vegetation communities that may provide habitat for plant or wildlife 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. Adjoining properties should also be surveyed where direct or indirect project effects, such as those from fuel modification or herbicide application, could potentially extend off-site. If feasible, the habitat assessment should be conducted during nondrought years. Vegetation communities should be classified and mapped to the alliance or association level using classification methods and membership rules according to *A Manual of California Vegetation*, 2nd edition (2009).

**Focused Surveys**. 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. The focused survey shall record the location and boundary of special status species by use of global positioning system (GPS). The number of individuals in each special status plant population shall be provided as counted (if population is small) or estimated (if population is large). If applicable, information about the percentage of individuals in each life stage, such as seedlings vs. reproductive individuals, should be provided. If feasible, images of the target species and representative habitats should be included to support information and descriptions.

**Preconstruction Surveys.** If construction activities are not initiated immediately after focused surveys have been completed, additional preconstruction special status species surveys may be required to ensure impacts are avoided or minimized to the extent feasible. If preconstruction 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.

**Biological Resources Report.** The results of the biological survey for proposed development projects with no significant impacts may be presented in a biological survey letter report. For proposed development projects with significant impacts that require mitigation to reduce the impacts to below a level of significance, the results of the biological survey shall be presented in a biological technical report.

BIO-2 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 sensitive resources to be avoided.

BIO-3 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.

BIO-4 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.

### Impact 5.4-2

Mitigation Measures BIO-1 through BIO-4 are also applicable to Impact 5.4-2.

### Impact 5.4-3

BIO-5 The City of Corona shall require applicants of development project that have the potential to affect jurisdictional resources to contract with a qualified biologist to conduct a jurisdictional delineation following the methods outlined in the 1987 USACE *Wetland Delineation Manual* and the *Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region* (USACE 2008) to map the extent of wetlands and nonwetland waters, determine jurisdiction, and assess potential impacts. The results of the delineation shall be presented in a wetland delineation report and shall be incorporated into the CEQA document(s) required for approval and permitting of the proposed development project.

Applicants of development projects that have the potential to impact jurisdictional features, as identified in the wetland delineation letter report, shall obtain permits and authorizations from the Army Corps of Engineers, California Department of Fish and Wildlife, and/or Santa Ana Regional Water Quality Control Board. The regulatory agency authorization(s) would include impact avoidance and minimization measures as well as mitigation measures for unavoidable impacts. Specific avoidance, minimization, and mitigation measures for impacts to jurisdictional resources shall be determined through discussions with the regulatory agencies during the proposed development project permitting process and may include monetary contributions to a mitigation bank or habitat creation, restoration, or enhancement.

### Impact 5.4-4

BIO-6 The City of Corona shall require a habitat connectivity/wildlife corridor evaluation for future development projects that may impact existing connectivity areas and wildlife linkages

identified in Figure 5.4-7, *Potential Wildlife Movement Corridors*, of the Draft EIR, which includes the Bedford Wash to Lake Mathews Estelle Mountain Reserve Corridor. The results of the evaluation shall be incorporated into the project's biological report required under Mitigation Measure BIO-1. The evaluation shall also identify project design features that would reduce potential impacts and maintain habitat and wildlife movement. To this end, the City shall incorporate the following measures, to the extent practicable, for projects impacting wildlife movement corridors:

- Adhere to low density zoning standards.
- Encourage clustering of development.
- Avoid known sensitive biological resources.
- Provide shielded lighting adjacent to sensitive habitat areas.
- Encourage development plans that maximize wildlife movement.
- Provide buffers between development and wetland/riparian areas.
- Protect wetland/riparian areas through regulatory agency permitting process.
- Encourage wildlife-passable fence designs (e.g., 3-strand barbless wire fence) on property boundaries.
- Encourage preservation of native habitat on the undeveloped remainder of developed parcels.
- Minimize road/driveway development to help prevent loss of habitat due to roadkill and habitat loss.
- Use native, drought-resistant plant species in landscape design.
- Encourage participation in local/regional recreational trail design efforts.

## Impact 5.4-5

BIO-7 The City of Corona shall require applicants for future development projects to contract with a qualified biologist to conduct a preconstruction general nesting bird survey within all suitable nesting habitats that may be impacted by active construction during general avian breeding season (February 1 through August 31). The preconstruction surveys shall be conducted no more than 7 days prior to initiation of construction. If no active avian nests are identified within the proposed development project area or within a 300-foot buffer of the proposed development project area, no further mitigation is necessary. If active nests of avian species covered by the Fish and Game Code are detected within the proposed development project area or within a 300-foot buffer of the proposed development project area, construction shall be halted until the young have fledged, until a qualified biologist has determined the nest is inactive, or until appropriate mitigation measures that respond to the specific situation have been developed and implemented in consultation with the regulatory

agencies. Based on the discretion of the qualified biologist, the 300-foot buffer may be expanded as appropriate to the species.

## 5.4.8 Level of Significance After Mitigation

### Impact 5.4-1

Buildout of the General Plan Update would impact sensitive plant and animal species in the City and SOI. Mitigation Measure BIO-1 would require that future development projects conduct a biological resources assessment in compliance with the CESA and FESA to determine if sensitive biological resources could be present within and/or adjacent to the proposed development project. Sensitive biological resources include special status species, sensitive natural communities, wetlands and jurisdictional waters, wildlife movement corridors and nursery sites, and other items identified in Appendix G of the CEQA Guidelines. Each project proponent would be responsible for determining the potential for occurrence of and impacts to sensitive vegetation communities, special status species, wildlife movement corridors, and nursery sites.

Implementation of Mitigation Measures BIO-1 through BIO-4 would ensure that impacts to special status species are avoided and/or minimized. Impact 5.4-1 would be less than significant.

### Impact 5.4-2

Growth accommodated through long-term buildout of the City and SOI would result in significant loss of habitat. The CESA and FESA regulate the loss of habitat as it pertains to special status plant and animal species. Coordination with the USFWS and CDFW would ensure that, on a project-by-project basis, habitat is replaced or conserved in accordance with the agency-determined ratios if special status plant and animal species occur or are likely to occur on-site, which will be determined through consultation. Implementation of Mitigation Measures BIO-1 through BIO-4 and implementation of the MSHCP and Stephen's Kangaroo Rat HCP would mitigate project-specific and cumulative impacts to biological resources in Western Riverside County.

### Impact 5.4-3

Implementation of the General Plan Update could cause the loss of undetermined amounts of riparian habitat, including jurisdictional waters. Mitigation Measure BIO-5 would require preparation of jurisdictional delineations mapping waters, wetlands, and riparian habitats jurisdictional to the Corps, CDFW, and RWQCB and specifying impacts to such resources. Mitigation Measure BIO-5 would also require project applicants to obtain permits and authorizations from the Corps, CDFW, and RWQCB specifying measures to avoid, minimize, and mitigate impacts. Impacts to jurisdictional riparian habitats would be less than significant.

### Impact 5.4-4

Implementation of the General Plan Update would involve developments in areas that may impact existing connectivity areas and wildlife linkages. Mitigation Measure BIO-6 would require preparation of habitat connectivity/wildlife corridor evaluations for each project proposed in an existing connectivity area or wildlife linkage, as identified in Figure 5.4-7, *Potential Wildlife Movement Corridors*, including the Bedford Wash

to Lake Mathews Estelle Mountain Reserve Corridor. Mitigation Measure BIO-6 specifies measures to be taken, to the extent practicable, to minimize impacts on wildlife movement. Impacts on wildlife movement would be less than significant.

### Impact 5.4-5

General Plan Update implementation could impact migratory birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code. Mitigation Measure BIO-7 would require preconstruction general nesting bird surveys and avoidance of impacts to active nests of bird species protected by federal and state laws. Impacts to migratory birds would be less than significant.

## 5.4.9 References

California Department of Fish and Wildlife (CDFW). 2019. California Endangered Species Act (CESA) Permits. https://www.wildlife.ca.gov/Conservation/CESA

_____. 2017. California Natural Diversity Database. QuickView Tool in BIOS. https://map.dfg.ca.gov/bios/?tool=cnddbQuick.

SWCA Environmental Consultants. 2018, January. City of Corona General Plan Update: Biological Resources Technical Report.

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# 5.5 CULTURAL RESOURCES

Cultural resources include archaeological and historical resources. A discussion of tribal cultural resources can be found in Section 5.18 of this DEIR. Archaeology studies human artifacts, such as places, objects, and settlements that reflect group or individual religious, cultural, or everyday activities. Historical resources include sites, structures, objects, or places that are at least 50 years old and are significant for their engineering, architecture, cultural use or association, etc. In California, historic resources cover human activities over the past 12,000 years. Cultural resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. This section of the DEIR evaluates the potential for implementation of the project to impact cultural resources in the City of Corona and its sphere of influence (SOI). The analysis in this section is based in part on the following information:

- *City of Corona General Plan Update: Cultural Resources Technical Report,* SWCA Environmental Consultants, December 2018

A complete copy of this study is included as Appendix F of this Draft EIR.

## 5.5.1 Environmental Setting

#### 5.5.1.1 REGULATORY FRAMEWORK

### Federal Regulations

#### *National Historic Preservation Act*

The National Historic Preservation Act of 1966 (NHPA) coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. The act authorized the National Register of Historic Places, which lists districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review ensures that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

#### *Archaeological Resources Protection Act*

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites on federal and Indian lands.

### *Native American Graves Protection and Repatriation Act*

NAGPRA is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

### *National Register of Historic Places*

The NRHP is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archeology, engineering, and culture. The NRHP recognizes resources of local, state, and national significance which have been documented and evaluated according to uniform standards and criteria.

Authorized under the NHPA, the NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. The NRHP is administered by the National Park Service, which is part of the US Department of the Interior.

To be eligible for listing in the National Register, a resource must meet at least one of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of our history.
- Is associated with the lives of persons significant in our past.
- Embodies the distinctive characteristics of a type, period or method of construction, represents the work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.
- Has yielded, or may be likely to yield, information important in history or prehistory.

To retain historic integrity a property will always possess several and often most of the aspects of integrity: These are location, design, setting, materials, workmanship, feeling, and association.

## State Regulations

### *California Public Resources Code*

Archaeological, and historical sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). Cultural resources also receive protection under the PRC and CEQA as nonrenewable resources.

PRC Sections 5020 to 5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for designating State Historical Landmarks and Historical Points of Interest.

PRC Sections 5079 to 5079.65 define the functions and duties of the Office of Historic Preservation, which administers federal- and state-mandated historic preservation programs and the California Heritage Fund.

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the Native American Heritage Commission (NAHC); require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

### *California Register of Historical Resources*

The State Historical Resources Commission has designed this program for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The California Register of Historic Resources (CRHR) is the authoritative guide to the state's significant historical and archeological resources.

The CRHR program encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA.

To be eligible for listing in the CRHR, a resource must meet at least one of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- Is associated with the lives of persons important to local, California, or national history.
- Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance. Alterations to a resource or changes in its use over time may change its historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

### *California Historical Landmarks*

California Historical Landmarks are buildings, structures, sites, or places that have been determined to have statewide historical significance. The resource must be approved for designation by the County Board of Supervisors or the City/Town Council in whose jurisdiction it is located; be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. A resource must meet at least one of these following criteria:

- Be the first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
- Be associated with an individual or group having a profound influence on the history of California.
- Be a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

### *California Points of Historical Interest*

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historical resource may be designated as both a landmark and a point. If a point is subsequently granted status as a landmark, the point designation is retired.

To be eligible for designation as a Point of Historical Interest, a resource must meet at least one of the following criteria:

- Be the first, last, only, or most significant of its type within the local geographic region (city or county).
- Be associated with an individual or group having a profound influence on the history of the local area.
- Be a prototype of, or an outstanding example of, a period, style, architectural movement or construction or be one of the more notable works or the best surviving work in the local region of a pioneer architect, designer or master builder.

### *California Historic Building Code*

The California Historic Building Code—California Code of Regulations, Title 24, Part 8—provides regulations for the preservation, restoration, rehabilitation, relocation, or reconstruction of buildings or properties designated as qualified historical buildings or properties. The California Historic Building Code is intended to provide solutions for the preservation of qualified historical buildings or properties, to promote sustainability, to provide access for persons with disabilities, to provide a cost-effective approach to preservation, and to provide for the reasonable safety of the occupants or users.

### *Mills Act*

Under the Mills Act, California Government Code Sections 50280 et seq., a city or county may contract with the owner of any qualified historical property to restrict the use of the property. The owner continues to preserve the property and the State reduces property taxes. The City adopted the Historic Property Preservation (Mills Act) Program in 2002. The Corona Community Development Department uses the Mills Act as an incentive for local property owners to preserve local historic buildings (CHPS 2018).

## Regional Regulations

### *Riverside County General Plan*

Cultural resources are addressed in the Multipurpose Open Space Element of the Riverside County General Plan. The County established a Cultural Resources Program in consultation with Native American Tribes and professional cultural resources consultants, to address projects subject to environmental review, engage in government-to-government consultation, process applications, manage databases, assist with maintaining confidentiality of site locations, provide review of technical studies, establish professional qualifications and requirements, monitor sites, provide examples of mitigation and preservation methods, and provide for curation in the unincorporated Riverside County. Other policies include reviewing proposed developments for the possibility of cultural resources and for compliance with the Cultural Resources Program, allocating resources for open space to preserve cultural resources in situ, and exercising sensitivity and respect for human remains in compliance with all applicable laws concerning such remains. The Riverside County Regional Park and Open-Space District's History Division reviews proposals for large development projects in the unincorporated Riverside County for the purpose of evaluating the potential destruction or preservation of historical sites. The County also promotes built environment preservation, the application of the Historic Building Code, and authorization of tax credits for retrofitting.

### *Riverside County Historical Commission*

The Riverside County Historical Commission (RCHC) is responsible for advising the County of Riverside Board of Supervisors on historic matters within the County. The RCHC discovers and identifies persons, events, and places related to the County's historical importance, makes recommendations related to preservation of historic sites and structures, makes recommendations related to the County's historical parks, sites, and museums and encourages their development, and obtains assistance from related agencies. The RCHC is overseen by the Riverside County Historic Preservation Officer and administers the Riverside County Historic Landmarks (RCHL) program.

### *Riverside County Historic Landmarks*

The Riverside County Historic Preservation Office is responsible for oversight of the RCHC and the Riverside County Historic Landmarks Program. The goal of the RCHL program is to recognize places as part of the county's history, community, and lives (Riverside County 2015). The RCHL program has an application and approval process. The RCHL provides types of resources and criteria for listing to the RCHL, which is loosely based on the CRHR criteria. Types of historical resources eligible for nomination include:

- **Building.** A resource, such as a house, barn, church, factory, hotel, or similar structure created principally to shelter or assist in carrying out any form of human activity.

- **Site.** A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possessed historical, cultural, or archaeological value. A site need not be marked by physical remains if it is the location of a prehistoric or historic event. Nor is it required that a building, structure, or object marked the site at the time of it is historic significance, occupation, or activity. Examples: trails, landscapes features, battlefields, habitation sites, Native American ceremonial areas, and rock art.

- **Structure.** The term "structure" is used to describe a construction made for a functional purpose rather than creating human shelter. Examples: mines, flumes, roads, bridges, and tunnels.

- **Object.** The term "object" is used to describe those constructions that are primarily artistic or commemorative in nature, relatively small in scale, and associated with a specific setting or environment. Objects that are located in museums are not eligible for landmark listing. Examples: fountains, monuments, maritime resources, sculptures, and boundary markers.

- **Historic Districts.** A geographic area designated as containing multiple historic resources that collectively have a special character or value—historical, cultural, architectural, archaeological, community, or aesthetic. A district must meet at least one of the criteria discussed below.

To be considered a historic resource eligible for landmark listing, the resource must be at least 45 years of age at the time of nomination. A historic resource must be significant under one or more of the following criteria in order to qualify for listing as a Riverside County Historic Landmark:

- Is associated with events that have made a significant contribution to the broad patterns of Riverside County's history and cultural heritage.

- Is associated with the lives of persons important to the history of Riverside County or its communities.

- Embodies the distinctive characteristics of a type, period, Riverside County region, or method of construction, or represents the work of an important creative individual or possesses high artistic values.

- Has yielded or may be likely to yield, information important in Riverside County, state of California, or national prehistory or history.

## Local Regulations

### *Corona General Plan Historic Resources Element*

The City adopted a Historic Resources Element and implementing ordinance in 2001. The goal of the Historic Resources Element is to identify key preservation issues and provide policies for planning and management of historic resources in the City.

## City of Corona Municipal Code

The purpose of the Corona Municipal Code Chapter 17.63, Historic Resources, "is to promote the recognition, preservation, and viability of historic resources" in the City. The code uses a seven-pronged approach: encouraging knowledge and pride in Corona's heritage; providing a process and register for identification of resources; establishing a process for review of future developments; encouraging and assisting private property owners with management and preservation of their historic resources and properties; promoting the management and preservation of Corona's historic resources that reflect the City's diverse cultural, social, artistic, economic, engineering, political, and architectural heritage; enhancing the City's cultural tourism; and promoting use of historic resources for education, enjoyment, and welfare of the people of the City. This code authorized the property preservation/tax reduction program, historic markers program, and historic design guidelines. It set the standards by which historic buildings are evaluated for the Corona Register of Historic Resources and the City's Heritage Inventory. It includes provisions for archaeological resources, architectural character/historic resources, and historic sites. This code has several goals and initiatives to protect the City's rich resources and community heritage.

### *Corona Historical Resources Ordinance 2270*

The Corona Historical Resources Ordinance 2270 encourages the preservation of the Corona Register of Historic Resources, which allows for the designation of "landmark trees" that meet certain criteria.

## Corona Register of Historic Resources

As a Certified Local Government (CLG) in the Federal Historic Preservation Program, the City of Corona has pledged its commitment to historic preservation. This commitment is key to the United States' ability to preserve, protect, and increase awareness of our unique cultural heritage found in the built environment across the country. Jointly administered by the National Park Service and the State Historic Preservation Office, the Federal Historic Preservation Program provides access to benefits of the program. In return, each CLG agrees to follow federal and state requirements concerning historic resources.

The Corona Register of Historic Resources, which was established in 2001, and the Corona Heritage Inventory comprise listings of buildings, structures, sites, and features of local significance, civic identity, and character. These include landmarks and historic districts.

### *Landmark*

Landmarks are those physical elements of Corona's historical development that provide the community with its own unique civic identity and character. A site, improvement, or natural feature shall be eligible for listing on the Corona Register as a landmark if the City Council finds that all the following criteria are satisfied:

- It has been in existence for a period of at least 50 years, or if less than 50 years old, is of exceptional importance to the community;
- It has significant historic, cultural or architectural value and its designation as a landmark is reasonable, appropriate and necessary to promote, preserve and further the purposes and intent of this chapter;

- It exhibits one or more of the following characteristics: and
  - It is associated with events that have made a significant contribution to the history of Corona, the region, the state or the nation;
  - It is associated with the lives of persons significant in Corona's past;
  - It embodies distinctive characteristics of a style, type, period or method of construction or a valuable example of the use of materials or craftsmanship;
  - It exemplifies or reflects special elements of the city's cultural, social, economic, political, aesthetic, engineering, architectural or natural history;
  - It is representative of the work of a notable builder, designer or architect;
  - It exemplifies one of the best remaining architectural styles or types in a neighborhood or contains outstanding elements of architectural design, detail, materials or craftsmanship of a particular historic period;
  - It is in a unique location or contains physical characteristics representing an established and familiar visual feature of a neighborhood;
  - It is a potential source of archeological or paleontological interest;
  - It is or contains a natural setting or feature that strongly contributes to the well being of the people of the city;
- It has integrity of location, design, setting, materials, workmanship, feeling and association;
  - Integrity is the authenticity of an historic resource's physical identity, as evidenced by the survival of characteristics that existed during the historic resource's period of significance, to be recognizable and to convey the reasons for its significance;
  - A site, improvement or natural feature that has diminished historic character or appearance may still have sufficient integrity for the Corona Register if it retains the potential to yield significant scientific or historical information or specific data or retains sufficient character to convey the reasons for its significance. Thus, it is possible that a site, improvement or natural feature may not retain sufficient integrity to meet the criteria for listing on the California Register or National Register, but it may still be eligible for listing on the Corona Register;
  - Integrity shall be judged with reference to the particular criterion or criteria which provide its eligibility. An improvement removed from its original location shall be eligible if it is significant primarily for its architectural value or it is the surviving structure most importantly associated with an historic person or event.

A reconstructed improvement shall be eligible if the reconstruction is historically accurate, the improvement is presented in a dignified manner as part of a restoration master plan and no other original improvement survives that has the same association. A site, improvement or natural feature that is intended to be primarily commemorative shall be eligible if its design, age, tradition or symbolic value creates its own historic significance. Examples include, but are not limited to, public statuary, murals, monuments, sculptures, graves and birthplaces. These sites or improvements may be identified by the placement of an historic marker.

### *Historic District*

An historic district is a geographically defined area possessing a concentration of contributing historic resources that relate to each other and are unified by physical development or historical context. A defined area shall be eligible for listing on the Corona Register as an historic district if the City Council finds that all the following criteria are satisfied:

- The defined area is a unified geographical area with precisely defined boundaries;
- The defined area contains a significant concentration of individually recognized contributing historic resources united in character by an historic plan, physical development, cultural heritage, past events, an historic period or prehistory era, aesthetics design or architectural traditions;
- At least 75 percent of the contributing historic resources in the defined area are 50 years of age or older and retain their original architectural character;
- The civic and historic value of the contributing historic resources is greater as a collective whole than as individual historic resources; and
- The defined area has significant historic, cultural or architectural value and its designation as an historic district promotes, preserves and furthers the purposes and intent of this chapter.

Upon the listing of an historic district on the Corona Register, all identified contributing historic resources in the historic district shall be individually listed on the Corona Register, along with notation of the historic district's noncontributing resources.

## *Corona Historic Inventory*

Adopted by the City Planning Commission in 2003, the Corona Heritage Inventory contains 482 properties recommended for preservation because of age or historic significance. Listing here was initiated by the City of Corona and not by individual property owners. A site, improvement or natural feature shall be eligible for listing on the Corona Heritage Inventory as a heritage property if the Planning Commission finds that all the following criteria are satisfied:

- An official survey, describing the features, merits and quality of the site, improvement or natural feature, has been prepared; and

- The site, improvement or natural feature is identified as a potential resource to be conserved because of its age, and either its context in the neighborhood, its association with an historic event or period, or its significance to the architectural, engineering, scientific, economic, agricultural, educational, cultural, social, artistic, political or military history of Corona.

### *Local Organizations*

#### *Corona Heritage Foundation/Corona Heritage Park and Museum*

The Corona Heritage Foundation doing business as the Corona Heritage Park and Museum seeks to promote and enhance the origins and development of the City itself. The Foundation uses education, recreation, and outreach across the community to reach these goals (CHF 2018).

#### *Corona Historic Preservation Society*

The CHPS was established in 1972 and recognized as a non-profit organization in 1974. CHPS' goal is to educate, act, and preserve Corona's history. They have placed 25 historic markers throughout the city to recognize historically significant sites (CHPS 2018).

## 5.5.1.2 EXISTING CONDITIONS

### Prehistoric Setting

### *Early Man Period/San Dieguito/Paleo-Coastal (CA. 10,000–6000 B.C.)*

Traditional models of California's prehistory hypothesize that the coastline was populated by Native Americans from the interior of North America during the end of the last Ice Age. The impact of post-Pleistocene climate change is thought to have caused Pleistocene lakes within the desert interior to diminish, and cultures dependent on these lakes began exploiting a wider range of plant and animal species, eventually inhabiting the coast.

At near-coastal and inland sites, it is generally considered that an emphasis on hunting may have been greater during the Early Man period than in later periods, although few Clovis-like or Folsom-like fluted points have been found in southern California. In Riverside County, only one isolated fluted point has been identified on the surface of a site in the Pinto Basin in the central part of the county.

### *Milling Stone Period (CA. 6000–3000/1000 B.C.)*

The Milling Stone period and the Encinitas Tradition of Warren are characterized by an ecological adaptation to collecting, and by the dominance of the principal ground stone implements generally associated with the horizontal motion of grinding small seeds—namely, milling stones (metates, slabs) and hand stones (manos), which are typically shaped. Milling stones occur in large numbers for the first time, and are even more numerous near the end of this period. As testified by their toolkits and shell middens in coastal sites, people during this period practiced a mixed food-procurement strategy.

Milling Stone period sites are common in the southern California coastal region between Santa Barbara and San Diego and at many inland locations, including the Prado Basin in western Riverside County and the Pauma Valley in northeastern San Diego County.

During the Milling Stone period and Encinitas Tradition, stone chopping, scraping, and cutting tools are abundant, and generally made from locally available raw material. Projectile points, rather large and generally leaf-shaped, and bone tools, including awls, are generally rare. The large points are associated with the spear, and probably with an atlatl. Items made from shell, including beads, pendants, and abalone dishes, are generally rare. Evidence of weaving or basketry is present at a few sites.

### *Intermediate Period (CA. 3000/1000 B.C.–A.D. 500/650)*

Although sites in the Prado Basin and Perris Reservoir area have cultural components that date to this period, the Intermediate period in western Riverside County is still not as well understood as it is in coastal areas.

During the Intermediate period, there is a pronounced trend toward greater adaptation to regional or local resources. Related chipped stone tools suitable for hunting are more abundant and diversified, and shell fishhooks become part of the toolkit during this period. Larger knives, a variety of flake scrapers, and drill-like implements are common during this period. Projectile points include large side-notched, stemmed, and lanceolate or leaf-shaped forms.

Mortars and pestles become more common during this period, gradually replacing manos and metates as milling stone implements. In addition, hopper mortars and stone bowls, including steatite vessels, appear to enter the toolkit at this time. This shift appears to correlate with a diversification in subsistence resources.

Characteristic mortuary practices during the Intermediate period include fully flexed burials, placed face down or face up and oriented toward the north or west. Red ochre is common, and abalone shell dishes are infrequent. Interments sometimes occurred beneath cairns or broken artifacts. Shell, bone, and stone ornaments, including charmstones, are more common than in the preceding Encinitas Tradition.

### *Late Prehistoric Period (CA. A.D. 500/650–1769)*

In all chronological schemes for southern California, the Late Prehistoric period lasts until significant European settlements were initiated in A.D. 1769.

During the Late Prehistoric period, there is an increase in the use of plant food resources in addition to an increase in land and sea mammal hunting. There was a concomitant increase in the diversity and complexity of material culture during this period, demonstrated by more classes of artifacts. Other items include steatite cooking vessels and containers, the increased presence of smaller bone and shell circular fishhooks, perforated stones, arrow shaft straighteners made of steatite, a variety of bone tools, and personal ornaments made from shell, bone, and stone. There is also an increased use of asphalt for waterproofing and as an adhesive. During the Late Prehistoric, sites contain beautiful and complex objects of utility, art, and decoration. Ornaments include drilled whole chione (venus clam) and drilled abalone. Most of the rock art found today in the Chumash sphere is thought to date to this period. Mortuary customs are elaborate, including cremation and interment, with abundant grave goods.

Another feature typical of Late Prehistoric period occupation is an increase in the frequency of obsidian imported from the Obsidian Butte source in Imperial County, California. Obsidian Butte was exploited after ca. A.D. 1000 after its exposure by the receding waters of Holocene Lake Cahuilla. A Late Prehistoric period component of the Elsinore site (CA-RIV-2798-A) produced two flakes that originated from Obsidian Butte. Although about 16 percent of the debitage at the Peppertree site (CA-RIV-463) at Perris Reservoir is obsidian, no sourcing study was done. The site contains a late Intermediate to Late Prehistoric period component and it is assumed that most of the obsidian originated from Obsidian Butte. During this period, there was an increase in population size accompanied by the advent of larger, more permanent villages. Many of the larger settlements were permanent villages where people resided year-round. The populations of these villages may have also increased seasonally.

The Chumash Tradition is present mainly in the region of Santa Barbara and Ventura Counties; the Takic or Numic Tradition in the Los Angeles, Orange, and western Riverside Counties region; and the Yuman Tradition in the San Diego region. The seemingly abrupt changes in material culture, burial practices, and subsistence focus at the beginning of the Late Prehistoric period are considered the result of a migration to the coast of peoples from inland desert regions to the east. In addition to the small triangular and triangular side-notched points similar to those found in the desert regions in the Great Basin and Lower Colorado River, Colorado River pottery and the introduction of cremation in the archaeological record are diagnostic of the Yuman Tradition in the San Diego region. This combination certainly suggests a strong influence from the Colorado Desert region.

In Los Angeles, Orange, and western Riverside Counties, similar changes (introduction of cremation, pottery, and small triangular arrow points) are considered the result of a Takic migration to the coast from inland desert regions. This Takic or Numic Tradition was formerly referred to as the "Shoshonean wedge" or "Shoshonean intrusion." This terminology, used originally to describe a Uto-Aztecan language group, is generally no longer used in order to avoid confusion with ethnohistoric and modern Shoshonean groups who spoke Numic languages. Modern Gabrielino, Juaneño, and Luiseño in this region are considered the descendants of the prehistoric Uto-Aztecan, Takic-speaking populations that settled along the California coast during this period, or perhaps somewhat earlier.

### *Ethnographic Overview*

The City of Corona and its SOI are located within an ethnographic transition zone between three Native American groups—the Juaneño, the Gabrielino, and the Cahuilla. All three groups are speakers of Takic languages, which are part of the Uto-Aztecan linguistic stock. Further, the closest ethnographically documented village to the General Plan area is known as Paxangna. A discussion of tribal cultural resources can be found in Section 5.18, *Tribal Cultural Resources*.

## Historical Setting

In the early 1800s, lands within the City of Corona and its SOI were part of several Mexican land grants: Rancho La Sierra, Rancho Jurupa, Rancho El Rincon, and Rancho El Sobrante de San Jacinto.

Throughout the nineteenth century, the area that would become Riverside County was an important travel corridor from the interior of the continent to the California coast. During the Gold Rush, thousands of people traveled the Gila (or Southern Overland) Trail from Yuma to Temecula and on to Los Angeles. The Butterfield Overland Mail Trail, a stagecoach service which delivered mail and passengers from St. Louis to San Francisco from 1858 to 1861, traversed the Temescal Valley along the same route as the Southern Emigrant Trail, with a station at Rancho Temescal south of Corona. Wagon roads and railroads constructed across the Colorado and Mojave Deserts from the 1850s to the 1870s connected coastal California with the rest of the country. These modes of transport served to carry mail, prospectors, miners, entrepreneurs, merchants, immigrants, laborers, muleteers, settlers, and military personnel, as well as civilian and military supplies, livestock, produce, timber, and minerals produced by desert mines, among other necessities.

The origins of the City of Corona are closely linked to the advent of the railroad and the phenomenal Southern California real estate boom of the 1880s. For Southern California, the citrus industry would form the basis of a significant new sector of California's economy. Corona was originally founded in 1886 when Robert B. Taylor, Adolph Rimpau, George L. Joy, A. S. Garretson, and Samuel Merrill purchased 12,000 acres of agricultural land in what was then the southwestern San Bernardino County. The land was developed by the newly formed South Riverside Land and Water Company who established a railroad depot and irrigation systems. With the addition of an irrigation infrastructure the building blocks of the citrus industry were laid. The town was named South Riverside, a name which it kept until 1896.

During this period the city's iconic circular boulevard was laid out by H. C. Kellogg and R. B. Taylor. In 1896 the citizens of South Riverside voted to incorporate into newly developed Riverside County. In July of that year, residents voted to change the name from South Riverside to Corona, which means "crown" in Spanish or Latin, because of the circular drive surrounding the city (at that time) that was the site of spectacular auto races between 1913 and 1916. This circular concrete thoroughfare was 60 feet wide and three miles in length, thus giving Corona the title "Circle City."

In 1888 the San Jacinto Land Company gained control of a tin mine in the San Jacinto Hills, which had been discovered in 1857. South Riverside was the nearest point to all the mines, giving its residents high expectations of the vast industry that would be emerging from the tin mines. The tin mines opened during the early part of 1891, and South Riverside became well known for having the only operating tin mine in the United States. The mines did not yield as much tin as originally expected; shipment of tin and work gradually decreased and stopped completely by 1893.

During this era the citrus industry became the driving industry of Corona, which was known as the lemon capital of the world. By 1913, Corona was shipping more fruit than any other town in southern California. In addition to growing the lemons there was a large processing plant that produced commercial products such as citric acid, sodium citrate, lemon juice, pectin, and lemon oil. During and after World War II, Corona experienced many changes, including increased racial integration and a growth in population. As time went on traditionally segregated areas such as schools and municipal pools became desegregated, and Asian families, who were once not even allowed to rent in the town, started moving in.

Many of the citrus and farming communities disappeared with the increase in industrialization. Significant changes occurred during the military buildup during World War II; military bases established across Riverside County brought thousands of men and their families into the area.

Riverside Freeway (State Highway 91) was constructed through Corona in 1962. In 1989, Interstate 15 was built through Norco and east of Corona, replacing many segments of Temescal Canyon Road. This new, straighter, and faster road encouraged expansion, resulting in new housing developments and related infrastructure.

## Archaeological Resources

Archaeological resources are the physical remains of past human activities and can be either prehistoric or historic. Archaeological sites contain significant evidence of human activity. Generally, a site is defined by a significant accumulation or presence of the following: food remains, waste from the manufacturing of tools, tools, concentrations or alignments of stones, modification of rock surfaces, unusual discoloration or accumulation of soil, and/or human skeletal remains.

A search for archaeological resources in the City of Corona and its SOI was completed by Eastern Information Center of the California Historic Resources Inventory System (CHRIS). Table 5.5-1, *Previously Recorded Archeological Resources,* lists the 70 previously recorded cultural resources that have been identified within the City of Corona. Of these resources, 30 are prehistoric archaeological sites, 38 are historic archaeological sites, 2 are multicomponent resources, and 6 are on the border between the City of Corona and its SOI. In the SOI, 86 previously recorded archaeological resources have been identified—74 are prehistoric archaeological resources, 10 are historic archaeological resources, and 2 are multicomponent resources.

Table 5.5-1 Previously Recorded Archeological Resources

| Primary | Trinomial | Resource Type | USGS Topographic Quadrangle |
|---|---|---|---|
| City of Corona | | | |
| P-33-000675 | CA-RIV-000675 | Prehistoric | Corona North |
| P-33-000808 | CA-RIV-000808 | Prehistoric, Historic | Corona North |
| P-33-001040 | CA-RIV-001040 | Prehistoric | Corona North |
| P-33-001044 | CA-RIV-001044 | Historic | Corona North |
| P-33-001259 | CA-RIV-001259 | Prehistoric | Corona North |
| P-33-001438 | CA-RIV-001438 | Prehistoric | Corona North |
| P-33-001439 | CA-RIV-001439 | Prehistoric | Corona North |
| P-33-001440 | CA-RIV-001440 | Prehistoric | Corona North |
| P-33-001441 | CA-RIV-001441 | Prehistoric | Corona North |
| P-33-001443 | CA-RIV-001443 | Prehistoric | Corona North |
| P-33-001445 | CA-RIV-001445 | Prehistoric | Corona North |
| P-33-001511 | | Historic | Corona South |
| P-33-001653 | CA-RIV-001653 | Prehistoric | Corona North |
| P-33-001654 | CA-RIV-001654 | Prehistoric | Corona North |
| P-33-001801 | CA-RIV-001801 | Prehistoric | Prado Dam |

Table 5.5-1 Previously Recorded Archeological Resources

| Primary | Trinomial | Resource Type | USGS Topographic Quadrangle |
|---|---|---|---|
| P-33-001837 | - | Prehistoric | Corona South |
| P-33-002679[1] | CA-RIV-002679 | Prehistoric | Lake Mathews |
| P-33-003055 | - | Historic | Corona South |
| P-33-003175[1] | CA-RIV-004112H | Prehistoric | Anza |
| P-33-003424 | CA-RIV-003424 | Historic | Black Star Canyon |
| P-33-003559 | CA-RIV-003559 | Prehistoric | Corona South |
| P-33-003685 | CA-RIV-003685 | Historic | Lake Mathews |
| P-33-003693 | CA-RIV-003693 | Historic | Prado Dam |
| P-33-003832 | CA-RIV-003832 | Historic | Alberhill, Corona North, Corona South, Lake Elsinore, Lake Mathews |
| P-33-004112[1] | CA-RIV-004112H | Historic | Corona South, Lake Mathews |
| P-33-004118 | CA-RIV-004118 | Prehistoric | Lake Mathews |
| P-33-004119 | CA-RIV-004119 | Prehistoric | Lake Mathews |
| P-33-004120 | CA-RIV-004120 | Prehistoric | Lake Mathews |
| P-33-004121 | CA-RIV-004121 | Prehistoric | Lake Mathews |
| P-33-004791[1] | CA-RIV-004791 | Historic | Corona North, Corona South, Riverside East, Riverside West, San Bernardino South |
| P-33-004808 | CA-RIV-004808 | Prehistoric, Historic | Myoma |
| P-33-005310 | CA-RIV-005310 | Historic | Corona North |
| P-33-005781 | CA-RIV-005521H | Historic | Corona North |
| P-33-005782 | CA-RIV-005522H | Historic | Prado Dam |
| P-33-007423 | - | Historic | Fontana |
| P-33-007586 | - | Historic | Corona North |
| P-33-007719 | CA-RIV-006197H | Historic | Corona South |
| P-33-008406 | CA-RIV-006133H | Historic | Corona South |
| P-33-009653 | CA-RIV-006453H | Historic | Corona South |
| P-33-010819[1] | CA-RIV-006532H | Historic | Black Star Canyon |
| P-33-011805 | - | Prehistoric | Lake Mathews |
| P-33-012556 | - | Prehistoric | Corona South |
| P-33-012622 | - | Prehistoric | Corona North |
| P-33-013056 | CA-RIV-007574 | Prehistoric | Toro Peak |
| P-33-013148 | - | Prehistoric | Corona South |
| P-33-013275 | - | Historic | Corona South |
| P-33-013276 | - | Historic | Corona South |
| P-33-013277 | - | Historic | Corona South |
| P-33-013409 | - | Prehistoric | Corona North |
| P-33-013857 | - | Prehistoric | Corona South |

Table 5.5-1 Previously Recorded Archeological Resources

| Primary | Trinomial | Resource Type | USGS Topographic Quadrangle |
|---|---|---|---|
| P-33-013858 | - | Historic | Corona South |
| P-33-013859 | - | Historic | Corona South |
| P-33-016051 | - | Historic | Lake Mathews |
| P-33-017132 | - | Historic | Corona South |
| P-33-017133 | - | Historic | Corona South |
| P-33-019802 | - | Historic | Prado Dam |
| P-33-023618 | - | Historic | Corona South |
| P-33-024188 | - | Historic | Corona South |
| P-33-024189 | - | Historic | Corona South |
| P-33-024190 | - | Historic | Corona South |
| P-33-024191 | - | Historic | Corona South |
| P-33-024192 | - | Historic | Corona South |
| P-33-024552 | - | Historic | Prado Dam |
| P-33-024553 | CA-RIV-012173 | Historic | Corona South |
| P-33-024723 | CA-RIV-012241 | Historic | Corona South |
| P-33-024724 | - | Prehistoric | Corona South |
| P-33-024725 | - | Prehistoric | Corona South |
| P-33-024726 | - | Prehistoric | Corona South |
| P-33-024855 | - | Historic | Corona South |
| P-33-024866[1] | CA-RIV-012327 | Historic | Corona North |
| Sphere of Influence (SOI) | | | |
| P-33-000034 | CA-RIV-000034 | Prehistoric | Lake Mathews |
| P-33-000078 | CA-RIV-000078 | Prehistoric | Lake Mathews |
| P-33-000108 | CA-RIV-000108 | Prehistoric | Lake Mathews |
| P-33-000630 | CA-RIV-000630 | Prehistoric | Lake Mathews |
| P-33-001089 | CA-RIV-001089 | Prehistoric | Lake Mathews |
| P-33-001090 | CA-RIV-001090 | Prehistoric | Lake Mathews |
| P-33-001099 | CA-RIV-001099 | Prehistoric | Lake Mathews |
| P-33-001169 | | Prehistoric | Palm Springs |
| P-33-001572 | CA-RIV-001572 | Prehistoric | Lake Mathews |
| P-33-001649 | CA-RIV-001649 | Prehistoric | Lake Mathews |
| P-33-001650 | CA-RIV-001650 | Prehistoric | Lake Mathews |
| P-33-002516 | - | Prehistoric | Riverside East |
| P-33-002680 | - | Prehistoric | Corona South |
| P-33-002728 | CA-RIV-002728 | Prehistoric | Corona North |
| P-33-002729 | CA-RIV-002729 | Prehistoric | Corona North |
| P-33-002730 | CA-RIV-002730 | Prehistoric | Corona North |

Table 5.5-1 Previously Recorded Archeological Resources

| Primary | Trinomial | Resource Type | USGS Topographic Quadrangle |
|---|---|---|---|
| P-33-002731 | CA-RIV-002731 | Prehistoric | Corona North |
| P-33-002732 | CA-RIV-002732 | Prehistoric | Corona North |
| P-33-003531 | CA-RIV-003531 | Prehistoric | Lake Mathews |
| P-33-003532 | CA-RIV-003532 | Prehistoric | Lake Mathews |
| P-33-003818 | CA-RIV-003818 | Prehistoric | Lake Mathews |
| P-33-003819 | CA-RIV-003819 | Prehistoric | Lake Mathews |
| P-33-003820 | CA-RIV-003820 | Prehistoric | Lake Mathews |
| P-33-003821 | CA-RIV-003821 | Prehistoric | Lake Mathews |
| P-33-003822 | CA-RIV-003822 | Prehistoric | Lake Mathews |
| P-33-003823 | CA-RIV-003823 | Prehistoric | Lake Mathews |
| P-33-003824 | CA-RIV-003824 | Prehistoric | Lake Mathews |
| P-33-003825 | CA-RIV-003825 | Prehistoric | Lake Mathews |
| P-33-003826 | CA-RIV-003826 | Prehistoric | Lake Mathews |
| P-33-003827 | CA-RIV-003827 | Prehistoric | Lake Mathews |
| P-33-003828 | CA-RIV-003828 | Prehistoric | Lake Mathews |
| P-33-003829 | CA-RIV-003829 | Prehistoric | Lake Mathews |
| P-33-003830 | CA-RIV-003830 | Prehistoric | Lake Mathews |
| P-33-003831 | CA-RIV-003831 | Prehistoric | Lake Mathews |
| P-33-005051 | CA-RIV-005051 | Prehistoric | Lake Mathews |
| P-33-005052 | CA-RIV-005052 | Prehistoric | Lake Mathews |
| P-33-005821 | - | Historic | Lake Mathews |
| P-33-008267 | CA-RIV-006152/H | Prehistoric, Historic | Lake Mathews |
| P-33-008433 | CA-RIV-006153 | Prehistoric | Lake Mathews |
| P-33-009701 | CA-RIV-0006467 | Prehistoric | Corona South |
| P-33-009702 | CA-RIV-0006468H | Historic | Corona South |
| P-33-009729 | CA-RIV-0006485 | Prehistoric | Corona South |
| P-33-009731 | CA-RIV-0006487 | Prehistoric | Corona South |
| P-33-009732 | CA-RIV-006488H | Historic | Corona South |
| P-33-011041 | CA-RIV-006652/H | Prehistoric, Protohistoric, Historic | Lake Mathews |
| P-33-011089 | - | Prehistoric | Lake Mathews |
| P-33-011090 | - | Prehistoric | Lake Mathews |
| P-33-011091 | - | Prehistoric | Lake Mathews |
| P-33-011185 | - | Prehistoric | Lake Mathews |
| P-33-011186 | - | Prehistoric | Lake Mathews |
| P-33-011187 | - | Prehistoric | Corona South |
| P-33-011188 | - | Prehistoric | Corona South |
| P-33-012557 | - | Prehistoric | Corona South |

Table 5.5-1 Previously Recorded Archeological Resources

| Primary | Trinomial | Resource Type | USGS Topographic Quadrangle |
|---|---|---|---|
| P-33-012559 | - | Prehistoric | Corona South |
| P-33-012560 | - | Prehistoric | Corona South |
| P-33-013146 | - | Prehistoric | Corona South |
| P-33-013147 | - | Prehistoric | Corona South |
| P-33-013490 | - | Prehistoric | Lake Mathews |
| P-33-013533 | - | Prehistoric | Lake Mathews |
| P-33-013534 | CA-RIV-007483 | Prehistoric | Lake Mathews |
| P-33-013622 | CA-RIV-007494 | Prehistoric | Lake Mathews |
| P-33-013623 | CA-RIV-007495 | Prehistoric | Lake Mathews |
| P-33-013624 | CA-RIV-007496 | Prehistoric | Lake Mathews |
| P-33-013625 | CA-RIV-007497 | Prehistoric | Lake Mathews |
| P-33-013690 | CA-RIV-007515 | Prehistoric | Lake Mathews |
| P-33-013691 | - | Prehistoric | Lake Mathews |
| P-33-013692 | - | Prehistoric | Lake Mathews |
| P-33-013693 | - | Prehistoric | Lake Mathews |
| P-33-015322 | CA-RIV-008090 | Historic | Lake Mathews |
| P-33-015362 | CA-RIV-008118 | Historic | Lake Mathews |
| P-33-015427 | CA-RIV-008137 | Historic | Lake Mathews |
| P-33-015706 | CA-RIV-008186 | Prehistoric | Lake Mathews |
| P-33-015707 | CA-RIV-008187 | Prehistoric | Lake Mathews |
| P-33-016035 | - | Historic | Lake Mathews |
| P-33-016231 | CA-RIV-008380 | Prehistoric | Lake Mathews |
| P-33-016687 | CA-RIV-008739 | Prehistoric | Lake Mathews |
| P-33-016688 | CA-RIV-008740 | Prehistoric | Lake Mathews |
| P-33-016700 | - | Prehistoric | Lake Mathews |
| P-33-016701 | - | Prehistoric | Lake Mathews |
| P-33-016702 | - | Prehistoric | Lake Mathews |
| P-33-016807 | - | Prehistoric | Lake Mathews |
| P-33-016808 | - | Prehistoric | Lake Mathews |
| P-33-016809 | - | Prehistoric | Lake Mathews |
| P-33-016947 | - | Historic | Lake Mathews |
| P-33-016999 | - | Historic | Hemet |
| P-33-017025 | CA-RIV-008864 | Historic | Lake Mathews |

Source: SWCA 2018.
[1] Six of these resources are on the border between the City of Corona and its SOI.

## Historic Resources

Historic resources are buildings, structures, objects, sites, and districts of significance in history, archaeology, architecture, and culture. These resources include intact structures of any type that are at least 50 years old. They are sometimes called the built environment and include houses and structures such as irrigation works and engineering features. Historical resources are preserved because they provide a link to a region's past and a frame of reference for a community. A search for built environmental resources in the City of Corona and its SOI was completed by Eastern Information Center of the CHRIS. Table 5.5-2, *Previously Recorded Historic Resources,* indicates the 31 previously recorded built environment resources were identified within the City. There is only one previously recorded built environment resource outside the City boundaries in the SOI. All of these resources are historic in age.

Table 5.5-2 Previously Recorded Historic Resources

| Primary | Trinomial | Resource Description | USGS Topographic Quadrangle |
|---|---|---|---|
| City of Corona | | | |
| P-33-014754 | - | | Corona North |
| P-33-017926 | - | Other - Corona City Park | Corona North, Corona South |
| P-33-020200 | - | Other - Riverside County Assessor Parcel Number (APN) 107-020-012 | Corona South |
| P-33-020201 | - | Other - AE-2418-1H;<br>Other - Riverside County APN 107-030-003;<br>Other - 14282 E. 6th Street | Corona South |
| P-33-020202 | - | Other - Riverside County APN 107-030-022 | Corona South |
| P-33-020204 | - | Other - Riverside County APN 107-040-006 | Corona South |
| P-33-020203[1] | - | Other - Riverside County APN 107-040-005 | Corona South |
| P-33-020205 | - | Other - Riverside County APN 107-060-003 | Corona South |
| P-33-020206 | - | Other - Riverside County APNs 107-060-008 & 107-060-009 | Corona South |
| P-33-020207 | CA-RIV-020207 | Other - Riverside County APN 115-090-003 | Corona South |
| P-33-020208 | - | Other - Riverside County APN 117-031-001 | Corona North |
| P-33-020209 | - | Other - Riverside County APN 117-031-002 | Corona North |
| P-33-020210 | - | Other - Riverside County APN 117-031-036 | Corona North |
| P-33-020211 | - | Other - Riverside County APN 119-041-013 | Corona North |
| P-33-020212 | - | Other - Riverside County APN 119-041-014 | Corona North |
| P-33-020213 | - | Other - Riverside County APN 119-041-015 | Corona North |
| P-33-020225 | - | Other - Riverside County APN 119-041-016 | Corona North |
| P-33-020226 | - | Other - Riverside County APN 119-041-017 | Corona North |
| P-33-020227 | - | Other - Riverside County APN 119-041-018 | Corona North |
| P-33-020229 | - | Other - Riverside County APN 119-041-020 | Corona North |
| P-33-020231 | - | Other - Riverside County APN 119-041-022;<br>Other - 1108 Serene Drive | Corona North |

Table 5.5-2 Previously Recorded Historic Resources

| Primary | Trinomial | Resource Description | USGS Topographic Quadrangle |
|---|---|---|---|
| P-33-020232 | - | Other - 1002 Peaceful Drive;<br>Other - Riverside County APN 119-041-024 | Corona North |
| P-33-020233 | - | Other - 1090 Serene Drive;<br>Other - Riverside County APN 119-043-001 | Corona North |
| P-33-020234 | - | Other - 1082 Serene Drive;<br>Other - Riverside County APN 119-043-002 | Corona North |
| P-33-020235 | - | Other - Riverside County APN 119-043-003;<br>Other - 1070 Serene Drive | Corona North |
| P-33-020236 | - | Other - Riverside County APN 119-043-004;<br>Other - 1058 Serene Drive | Corona North |
| P-33-020237 | - | Other - 1050 Serene Drive;<br>Other - Riverside County APN 119-043-005 | Corona North |
| P-33-024119 | CA-RIV-011860 | Other - Sidebotham (Phillips) Quarry (north);<br>Other - LSA-MGI1401-S-1 | Corona South |
| P-33-024207 | - | | Corona North |
| P-33-024551 | CA-RIV-012171 | | Prado Dam |
| Sphere of Influence (SOI) | | | |
| P-33-016976 | CA-RIV-008842 | Sky Ranch | Corona South |

Source: SWCA 2018.
[1] Resource is on the border between the City of Corona and its SOI.

## *National*

### *National Register of Historic Places*

There are seven historic properties defined as listed or eligible for listing on the NRHP in the City of Corona. There are no resources within the SOI that are listed on the NRHP.

- **Carnegie Library (1906):** This neo-classical building was designed by Los Angeles architect Franklin Pierce Burnham; the building was demolished on April 18, 1978. The building was added to the National Register June 29, 1977.

- **Women's Improvement Club Clubhouse (1913):** This one-story, multi-gabled, Craftsman-styled bungalow clubhouse was designed by architect Thomas Preston. It was added to the National Register on November 3, 1988.

- **Corona Theater Landmark Building (1929):** The Spanish Revival-style Corona Theater was designed by architect Carl Boller. The building is the only pre-Depression Era theater remaining in Corona that has been determined eligible for the National Register.

- **Corona Heritage Park (1900):** This 5-acre complex was the headquarters for the Corona Foothill Lemon Company, the largest citrus ranch in the area in the early 1900s. The Corona Heritage Foundation is restoring the complex as a historic park and museum facility.

- **Corona High School/Civic Center (1923):** Originally constructed as Corona's second high school, it became the Civic Center in 1961. The building was added to the National Register on August 3, 2005.

- **Jefferson Elementary**, 10th Street and Vicentia Avenue. This site joined the California and National Register of Historic Places in 2017. It includes the 1927 Spanish Colonial Revival–style original school and 1931-addition south wing. The building was added to the National Register on September 28, 2017.

- **Grand Boulevard Historic District (1886):** This unique circular roadway was a prominent design element in the original layout for the town site. The boulevard was added to the National Register on July 14, 2011.

### State

#### *State Historic Landmarks*

There are no State Historic Landmarks within the City of Corona. However, the City contains two State Historical Points of Interest:

- Bandini-Cota Adobe Site

- Temescal Tin Mines California Register of Historical Resources

Within the SOI, there are eight State Historic Landmarks:

- **Serrano Boulder (No. 185):** The boulder placed by residents of Temescal Valley marks the site of the first house in Riverside County, erected by Leandro Serrano in about May 1824.

- **Serrano Tanning Vats (No. 186):** Two vats were built in 1819 by the Luiseño Indians under the direction of Leandro Serrano, the first non-Indian settler in what is now Riverside County. In 1981, the vats were restored.

- **Carved Rock (No. 187):** The petroglyphs were carved by the Luiseño Indians. The rock has been damaged by vandals.

- **Butterfield Stage Station (No. 188):** Site of Butterfield Stage Station where mail was delivered and horses changed. The first stage carrying overland mail left Tipton, Missouri, on September 15, 1858, and passed through Temescal to arrive in Los Angeles on October 7, 1858.

- **Painted Rock (No. 190):** In tribute to the earliest record of any people in this region, the Santa Fe Railway has preserved this rock with its ancient pictograph, and the Committee of the Corona Women's Improvement Club has placed a tablet.

- **Ruins of the Third Serrano Adobe (No. 224):** In the 1840s, Don Leandro Serrano built his third adobe, which the Serrano family occupied until 1898.

- **Old Temescal Road (No. 638):** This route was used by Luiseño and Gabrielino Indians, whose villages were nearby. Leandro Serrano established a home here in 1820. Jackson and Warner traveled the road in

1831, and Frémont in 1848. It was the southern emigrant road for gold seekers from 1849 to 1851, the Overland Mail route from 1858 to 1861, and a military road between Los Angeles and San Diego from 1861 to 1865.

- **Corona Founders Monument (No. 738):** R. B. Taylor, George L. Joy, Samuel Merrill, A. S. Garretson, and Adolph Rimpau, after purchasing lands of La Sierra Rancho and El Temescal grant, founded the citrus colony and town of Corona on May 4, 1886.

#### *State Historical Points of Interest*

The seven properties listed on the NRHP are also automatically eligible for listing to the CRHR. In addition, there are nine other properties that are eligible for the CRHR:

- Jefferson Elementary School (1927)
- Barber Home (1893) – Eastlake
- 1101 S Ramona Ave (1915) – Vernacular Wood Frame with Classical revival Elements
- Terpening House (1899) – Queen Anne
- Corona First Methodist Church (1914) – Tudor Revival
- 401 East 8th Street (1908) – Vernacular Wood Frame
- Camp Haan Barracks (1942) – Vernacular Wood Frame
- 517 E 8th Street (1896)
- El Gordo Caballo Ranch (1939)

### *Local*

#### *Corona Register of Historic Resources*

The Corona Register of Historic Resources includes landmarks, markers, and districts that identify sites of important historical/cultural interest in the City. There are 367 individual built environment resources listed on the Corona Register of Historic Resources. Of these resources, 308 of them are eligible as contributors to districts (see Appendix C of Appendix F).

*Corona Historic Landmarks*

Table 5.5-3, *Historic Landmarks in the City of Corona,* identifies 57 properties that are listed on the Corona Historic Landmarks.

Table 5.5-3 Historic Landmarks in the City of Corona

| Historic District (HD)/Landmark (HL) Number | Address | APN | District or Style | Date Built | Date approved by City Council |
|---|---|---|---|---|---|
| HD-001 | 510 W Foothill Ave | 114-350-046 | Heritage Park District | 1913<br>1927<br>1937 | May 16, 2001 |
| HD-002 | 2750 S Rimpau Av | 120-121-028 | Lemonia Grove District | 1895 | May 16, 2001 |
| HD-003 | 2837 S Kellogg Av | 120-072-008 | Kammeyer Ranch District | 1892<br>1895 | May 16, 2001 |
| HD-004 | 1125 S Rimpau Av | 111-290-024 | Sunny Slope Cemetery District | 1892 | May 16, 2001 |
| HD-005 | 930 E Sixth St | 117-310-001 | City Park District | 1913 | May 16, 2001 |
| HD-006 | Grand Blvd Circle | Not Available | Grand Blvd. Streetscape District | NA | May 16, 2001 |
| HD-007 | Chase Dr (Garretson To Foothill) | Not Available | Chase Drive Palm Trees District | Pre-1930 | May 16, 2001 |
| HD-008 | Rimpau Av (Old Temescal Rd To Chase) | Not Available | Rimpau Ave. Palm Trees District | Pre-1930 | May 16, 2001 |
| HD-009 | Main St (Olive To Chase) | Not Available | South Main Street Palm Trees District | Pre-1930 | May 16, 2001 |
| HD-010 | Palisades Dr (1 Mile From Green River/Wardlow Wash Bridge) | Not Available | Palisades Drive Roadway District | NA | June 3, 2015 |
| HL-001 | 1101 S Main St | 117-266-006 | Woman's Improvement Club | 1913 | May 16, 2001 |
| HL-002 | 815 W Sixth St | 118-270-049 | Historic City Hall | 1923 | May 16, 2001 |
| HL-003 | 900 S Victoria Av | 117-236-001 | Victoria Park/Old Lincoln Cemetery | N/A | May 16, 2001 |
| HL-004 | 722/423 S Joy St/Eighth | 117-206-009 | Joy Street Market and Residence | N/A | Revoked On Nov 18, 2009 |
| HL-005 | 1169 E Grand Blvd | Not Available | Not Available | N/A | May 16, 2001 |
| HL-006 | 1156 E Grand Blvd | Not Available | Not Available | N/A | May 16, 2001 |
| HL-007 | 1148 E Grand Blvd | Not Available | Not Available | N/A | May 16, 2001 |
| HL-008 | 1136 E Grand Blvd | Not Available | Not Available | N/A | May 16, 2001 |
| HL-009 | 1036 E Grand Blvd | Not Available | Not Available | N/A | May 16, 2001 |
| HL-010 | 822 S Joy St | 117-241-001 | Not Available | N/A | September 17, 2001 |
| HL-011 | 1314 S Victoria Av | 109-041-014 | Not Available | N/A | July 17, 2001 |
| HL-012 | 1147 E Grand Blvd | Not Available | Not Available | N/A | September 18, 2002 |
| HL-013 | 123 W Eleventh St | 117-254-012 | Vernacular Wood Frame | 1915 | July 16, 2003 |
| HL-014 | 1214 S Belle Av | 110-192-018 | Vernacular Wood Frame | 1920 | July 16, 2003 |
| HL-015 | 616 W Eleventh St | 110-172-009 | Provincial Revival | 1928 | January 7, 2004 |
| HL-016 | 1315 S Main St | 109-041-002 | Mediterranean/Spanish Revival | 1935 | October 20, 2004 |
| HL-017 | 818 S Howard St | 117-233-022 | Queen Anne | 1890 | October 20, 2004 |

Table 5.5-3 Historic Landmarks in the City of Corona

| Historic District (HD)/Landmark (HL) Number | Address | APN | District or Style | Date Built | Date approved by City Council |
|---|---|---|---|---|---|
| HL-018 | 1128 E Grand Blvd | 117-263-016 | Vernacular Wood Frame | 1929 | October 19, 2005 |
| HL-019 | 1052 E Grand Blvd | 117-264-005 | Victorian (mixed style) | 1888 | May 3, 2006, Dec. 19, 2007 |
| HL-020 | 809 E Grand Blvd | 111-022-011 | Not Available | 1924-27 | May 3, 2006 |
| HL-021 | 1052 E Grand Blvd | Not Available | Not Available | NA | July 5, 2006 |
| HL-022 | 1170 E Grand Blvd | 117-265-010 | Mediterranean/Spanish Revival | 1924 | August 16, 2006 |
| HL-023 | 1301 S Main St | 109-041-004 | Vernacular Wood Frame w/Craftsman Bungalow Elements | 1910 | October 4, 2006 |
| HL-024 | 1124 Palm Av | 109-033-005 | Vernacular Wood Frame | 1920 | October 18, 2006 |
| HL-025 | 920 S Victoria Av | 117-237-002 | Bungalow | 1930 | October 18, 2006 |
| HL-026 | 1107 W Grand Blvd | 117-252-022 | Vernacular Wood Frame | 1908 | May 16, 2007 |
| HL-027 | 1120 Palm Av | 109-033-004 | Vernacular Wood Frame | 1912 | June 20, 2007 |
| HL-028 | 824 S Sheridan St | 117-221-001 | Vernacular Wood Frame | 1907 | June 20, 2007 |
| HL-029 | 623 S Merrill St | 117-173-016 | Victorian (mixed style)/Queen Anne | 1893 | July 18, 2007 |
| HL-030 | 1047 E Grand Blvd | 109-031-002 | Not Available | NA | September 5, 2007 |
| HL-031 | 1101/1103 S Victoria Av | 117-263-014 | Transitional Bungalow | 1917 | October 17, 2007 |
| HL-032 | 1133 E Grand Blvd | 109-022-002 | Not Available | 1913 | August 6, 2007 |
| HL-033 | 914 S Victoria Av | 117-237-012 | Vernacular Wood Frame w/Bungalow Elements | NA | October 17, 2007 |
| HL-034 | 1164 E Grand Blvd | 117-265-009 | Not Available | NA | July 16, 2008 |
| HL-035 | 1208 Palm Av | 109-033-007 | Bungalow | 1914 | September 17, 2008 |
| HL-036 | 122 E Olive St | 109-041-006 | Bungalow | 1916 | September 17, 2008 |
| HL-037 | 1222 S Victoria Av | 109-021-011 | Vernacular Wood Frame | 1916 | September 17, 2008 |
| HL-038 | 934 E Grand Blvd | 117-243-009 | Not Available | Not Available | September 17, 2008 |
| HL-039 | 802 W Grand Blvd | 110-112-007 | Not Available | Not Available | October 21, 2009 |
| HL-040 | 805/809 S Ramona Av | 117-232-007 | Gothic Revival | 1910-11 | August 5, 2009 |
| HL-041 | 1127 E Grand Blvd | 109-022-003 | Not Available | Not Available | September 1, 2010 |
| HL-041 | 1127 E Grand Blvd | 109-022-003 | Not Available | Not Available | September 1, 2010 |
| HL-042 | 353 E Olive St | 109-033-012 | Not Available | Not Available | July 17, 2013 |

Table 5.5-3 Historic Landmarks in the City of Corona

| Historic District (HD)/Landmark (HL) Number | Address | APN | District or Style | Date Built | Date approved by City Council |
|---|---|---|---|---|---|
| HL-043 | 1031 E Grand Blvd | 109-031-004 | Not Available | Not Available | September 17, 2014 |
| HL-044 | 1518 S Main St | 109-072-008 | Not Available | 1938 | September 16, 2015 |
| HL-045 | 119 E Kendall St | 109-041-021 | Vernacular Wood Frame | 1910 | September 17, 2016 |
| HL-046 | 502 W Eleventh St | 110-172-020 | Mission Revival | 1926 | October 18, 2017 |
| HL-047 | 1839 S. Main Street | 109-283-001 | Vernacular Wood | 1889-92 | November 7, 2018 |
| HL-048 | 1215 E Grand | 109-021-003 | Vernacular Wood | 1902 | November 7, 2018 |
| HL-049 | 506 E Seventh Street | 117-205-002 | Victorian Hipped Roof Cottage | 1900 | November 6, 2019 |

Source: SWCA 2018 and Corona Community Development Department.

*Corona Historic Markers*

As identified in Table 5.5-4, *Historic Marker in the City of Corona,* there are 10 Historic Markers within the City.

Table 5.5-4 Historic Markers in the City of Corona

| Historic Marker Number | Description | Location | Date Built | Date Dedicated |
|---|---|---|---|---|
| HM-00 | Corona Road Races | W. Grand Blvd and Main St | 1913 | 1986 |
| HM-01 | Corona High School and Civic Center | W. Sixth St & Buena Vista Ave | 1923 | Not Available |
| HM-02 | First Congregational Church | Ramona & Eighth St | 1887<br>1911 | Not Available |
| HM-03 | First Corona Police Officer was killed in the line of duty | Sixth & Howard | 1913 | Not Available |
| HM-04 | Jefferson Elementary | Tenth & Vicentia Streets | 1927 | Not Available |
| HM-05 | Site of Corona's First Fire Station | S. Main & Eighth St. | 1898 | 1998 |
| HM-06 | Site of Lincoln Elementary School | Howard & Ninth Streets | 1889<br>1914 | 1998 |
| HM-07 | Original Site of Victoria Hotel | E. Sixth Street & Victoria Ave | 1904 | 1999 |
| HM-08 | Site of First Corona Hospital | Eighth & Belle Streets | 1933 | 1999 |
| HM-09 | Corona's First High & Middle School | Main St and Grand Blvd | 1937 | 2000 |

Source: SWCA 2018.

*Corona Historic Districts*

As required by the municipal code, the city council has made the findings to establish 10 historic districts in Corona:

- **Heritage Park District**, built 1913. The park is built at the site of the Foothill Ranch, Corona's last citrus packinghouse complex. The site includes the company store, packinghouse, original residence of ranch founder H. E. Hampton, outbuildings, century-old trees, exotic specimens, and a functioning lemon grove.

- **Lemonia Grove District**, built 1895. This district is located on 3½ acres of land at 2750 Rimpau Avenue. Oscar Thieme, a German businessman, established the estate in 1895. He planted the area around his home with a wide variety of lush specimen trees, ornamental shrubs, flowering vines, and multitudes of flowers.

- **Kammeyer Ranch District**, built 1892 and 1895. Kammeyer Ranch District is located on five acres of land at 2837 South Kellogg Avenue and is a typical complex reminiscent of Corona agricultural history. Citrus ranchers and the Gilbert family's groves surrounded their home.

- **Sunnyslope Cemetery District**, built 1892. The cemetery is at 1125 South Rimpau. A small section was reserved for paupers. Many of the city's founding families are buried here. The grounds, graves, headstones, and memorials are reminders of the people who founded, shaped, guided, and shared the city's history.

- **City Park District**, built 1913. City Park, the first park built in the City, is a 20-acre site at 930 East Sixth Street. Local architect Leo Kroonen Sr. designed a "City Plunge" swimming pool complex that was built in 1925 and later demolished. A Founders Plaque was erected on the site in 1936. It was listed as California Historic Landmark No. 738, Corona Founders Monument.

- **Grand Boulevard Streetscape District** (2001). The unique circular roadway was a prominent feature used as an race course for internationally acclaimed road races in 1913, 1914, and 1916. It gave rise to the long-standing moniker "The Circle City," which makes Corona distinctive from any other city. The city's only "boulevard," it contains wide parkways, large mature trees, and historic street lamps fronting the stately homes of the city founders and early city leaders.

- **Historic Roadway Districts.** The final four historic districts consist of individual roadway segments in Corona that are historically significant to the City and were lined with landmark palm trees. These roadway segments are:

    - Chase Drive Palm Trees District (built pre-1930)
    - Rimpau Avenue Palm Trees District (built pre-1930)
    - South Main Street Palm Trees District (built pre-1930)
    - Palisades Drive Roadway District (build date unknown)

## 5.5.2 Thresholds of Significance

CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. Generally, a resource shall be considered "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated the with lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history. (PRC § 5024.1; 14 CCR § 4852)

The fact that a resource is not listed in the California Register of Historical Resources, not determined to be eligible for listing, or not included in a local register of historical resources does not preclude a lead agency from determining that it may be a historical resource.

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

C-1 Cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5.

C-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

C-3 Disturb any human remains, including those interred outside of dedicated cemeteries.

## 5.5.3 Relevant General Plan Policies

The following are relevant policies from the Historic Resources Element of the Corona General Plan Update, which may contribute to reducing potential impacts to cultural resources as a result of implementation of the proposed project.

### Land Use Element

- **LU-5.2** Promote development patterns and structures that recognize and maintain the historic character of recognized heritage properties and those that have potential to become eligible for historical significance..

- **LU-5.14** Support the conservation, maintenance, and upgrading of housing, commercial buildings, and historic structures through education, technical and financial assistance, and partnerships.

- **LU-5.15** Require that new and rehabilitated structures be designed, built, and maintained in a manner that promotes their physical longevity, and at the same time provide architectural details consistent with the City's design guidelines and other applicable codes and ordinances.

- **LU-5.16** Maintain proactive code enforcement and nuisance abatement programs to ensure that properties in Corona's residential neighborhoods and business and service districts are properly maintained in order to preserve the quality and appearance of developed properties, making the city a desirable place to reside and/or conduct commerce.

- **LU-8.6** Encourage the rehabilitation and relocation of historic homes slated for demolition to other appropriate sites in the City; encourage the rehabilitation of homes that will soon become eligible for historic designation due to their age, integrity, and significance.

### Housing Element

- **H-3.1** Recognize the City's inventory of existing historic structures and seek programs to enhance and preserve those neighborhoods.

- **H-3.2** Encourage the revitalization of the existing dwelling units in the Circle area through rehabilitation programs..

### Community Design Element

- **CD-1.4** Protect landscaping and mature trees that are symbolic of the City's agricultural heritage, history, or identity for a district, neighborhood, or street corridor.

- **CD-3.5** Collaborate with the Corona Historical Society or other nonprofit organizations to maintain and expand the Historic Markers program that identifies historical properties and/or historic landscapes in the City..

- **CD-5.2** Maintain and expand a program of Historic Markers that identify important historical buildings, properties, and landscape in the Downtown..

### Historic Resources Element

#### *Historical and Cultural Resources*

- **HR-1.1** Continue to implement and expand upon, as feasible, the following historic resources management strategies:

    - A local Corona Historic Register that includes significant "Landmark" properties, "Historic Districts," and "Historical Markers" as prescribed in the Corona Municipal Code.

- A Corona Heritage Inventory that includes surveyed properties meeting all of the criteria as prescribed in the Corona Municipal Code to be considered a local historic resource.
- Procedures and criteria for determining the eligibility for listing properties on the Corona Historic Register and the Corona Heritage Inventory.
- Standards and regulations governing the identification, protection, restoration, maintenance, alteration, relocation, or removal of historic resources..

- **HR-1.2** Expand existing surveys of historic resources to include areas of potential historic importance not previously surveyed, and develop an ongoing program for updating the surveys on a regular basis.
- **HR-1.3** Continue to implement criteria and guidelines for the inclusion of historic resources and historic structures for the Historic Register and Heritage Inventory, including but not limited to: sites, parks, landscape elements, streets, streetlights, signs, monuments, murals, and public art.
- **HR-1.4** Continue to implement and expand upon preservation incentive programs that encourage property owners to preserve, restore, and maintain historic properties, and secure public and private funding sources to assist in said preservation.
- **HR-1.5** Support the preservation of historic resources controlled by other governmental agencies, including those related to federal, state, county, school district, and other agencies. This includes resources under the jurisdiction of the Army Corps of Engineers at Prado Basin.
- **HR-1.6** Seek and support City-sponsored, nonprofit, and privately sponsored public events and festivals, as feasible, that recognize and promote the cultural and historic heritage of Corona.
- **HR-2.1** Assist and encourage property owners and tenants to maintain the character and integrity of the historic resource, and to restore and reuse historic properties in a manner compatible with their original architectural style.
- **HR-2.2** Continue to implement design guidelines for restoring historic and architecturally significant structures, including but not limited to, the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.
- **HR-2.3** Develop an inventory of information and resources regarding the proper rehabilitation techniques in order to assist owners and developers of historic buildings.
- **HR-2.4** Administer the State Historic Building Code to facilitate the restoration and rehabilitation of historic structures in a manner that is more appropriated to older structures than the standard building codes.
- **HR-2.5** Require all modifications to historic properties to be consistent with the Secretary of the Interior's "Standards for the Treatment of Historic Properties with Guidelines for Preserving,

Rehabilitating, Restoring, and Reconstructing Historic Buildings" or "Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings."

### *Paleontological Resources*

- **HR-3.1** Require appropriate treatment/preservation of archaeological collections in a culturally appropriate manner, in accordance with state and federal standards, and in consultation with interested Native American tribes that have traditional cultural affiliation with the project area and/or the resources affected by the project.

- **HR-3.2** Require that development proposals incorporate specific measures to identify, protect, and preserve cultural resources in the planning, environmental review, and development process.

- **HR-3.3** Archaeological resources found prior to or during construction shall be evaluated by a qualified archaeologist and appropriate mitigation measures applied, pursuant to § 21083.2 of CEQA, before the resumption of development activities. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the appropriate CHRIS information center.

- **HR-3.4** Any project that involves earth-disturbing activities in an area determined to be archaeologically or culturally sensitive shall require evaluation of the site by a qualified archaeologist. The applicant shall implement the recommendations of the archaeologist, subject to the approval of the City. Planning Department.

- **HR-3.5** Any project that involves earth-disturbing activities in an area determined to be archaeologically or culturally sensitive shall require consultation by the applicant with interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, for the purposes of determining resources impacts and appropriate mitigation to address such impacts. Applicant shall also arrange for monitoring of earth-disturbing activities by interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, if requested..

- **HR-3.8** In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area shall be protected and the project applicant immediately shall notify the Riverside County Coroner and comply with provisions of the Health and Safety Code § 7050.5, including PRC § 5097.98, if applicable. If the find is determined to be Native American human remains, the applicant shall consult with the Most Likely Descendent to determine appropriate treatment for such remains.

- **HR-4.1** Develop an inventory and map concentrations of Heritage Street Trees, which are representative of the City's character and history, for consideration and official inclusion on the Corona Historic Register or the Heritage Inventory.

- **HR-4.2** Designate "Landmark Trees" in accordance with existing City policy and ordinance in order to preserve and protect individual specimen trees, which display particular historic value to the community.

- **HR-4.3** List applicable parks within Grand Boulevard, as resources on the Corona Historic Register, in order to preserve their historic identity and become eligible for funding for future restoration and maintenance.

- **HR-5.1** Encourage, participate in, and promote activities and events designed to educate the community about Corona's unique heritage and the recognition of its many cultural and historic resources.

- **HR-5.2** Promote the archival collection and documentation of Corona's history at the Heritage Room of the Corona Public Library, and establish this facility as the official local repository for historic and cultural resource records.

- **HR-5.3** Develop educational and interpretive brochures for distribution to the public and property owners about the City's historic resources, preservation programs, financial incentives for designated properties, and restoration requirements and guidelines.

- **HR-5.4** Foster neighborhood conservation and beautification programs and consider preservation awards or recognition certificates for historic properties displaying exceptional care, maintenance, or restoration.

- **HR-5.5** Inform property owners of the benefits of being a listed historic property and provide information on conservation methods and professional resources.

- **HR-6.1** Coordinate with the Chamber of Commerce, Corona Historic Preservation Society, State Office of Historic Preservation, and other organizations or agencies regarding potential programs that promote tourism, filming, and economic development in association with historic resources.

- **HR-6.2** Encourage the involvement of the Corona-Norco Unified School District in preservation activities, local history programs, and the potential listing of identified historic school sites on the Corona Historic Register.

- **HR-6.3** Work cooperatively with the Corona Heritage Foundation in the establishment and improvement of Heritage Park as a historic citrus ranch complex in South Corona.

- **HR-6.4** Consider application to the State of California Historic Preservation Office for acceptance as a Certified Local Government, and for having a Certified Local Ordinance for historic resource management.

- **HR-6.5** Continue to consider and assist in the nomination of Corona's historic resources to the National Register of Historic Places, the California Historic Landmarks program, and the California Points of Historical Interest program.

- **HR-6.6** Work cooperatively with the Corona Historic Preservation Society, and other nonprofit and community organizations, in the placement of appropriate Historical Markers, monuments, or plaques to memorialize historic sites in Corona.

- **HR-6.7** Work cooperatively with the Corona Historic Preservation Society and other nonprofit organizations and individuals applying for available local, State, and federal funding for the rehabilitation and restoration of historic properties and resources.

## 5.5.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

### Impact 5.5-1: Buildout of the City of Corona General Plan could impact historic resources. [Threshold C-1]

#### General Plan

There are 31 previously recorded built environment resources identified within the City of Corona, as well as seven historic properties defined as listed or eligible listing on the NHRP. Within the City, there are no State Historic Landmarks, but there are two State Historical Points of Interest. The five properties listed on the NRHP are automatically eligible for listing to the CRHR; additionally, there are eight other properties that are eligible for CRHR. The Corona Register of Historic Resources contains 367 individual built-environment resources. Additionally, there are 57 identified properties that are listed on the Corona Historic Landmarks, and 10 identified Historic Markers. Moreover, only one previously recorded built environment resource was identified within the SOI. There are no resources within the SOI listed on the NRHP. The City's SOI contains 8 State Historic Landmarks.

Development in accordance with the proposed project could adversely impact any of these historic resources.

Known or future historic sites or resources listed in the national, California, or local registers maintained by the City would be protected through local ordinances, the General Plan Update policies, and state and federal regulations restricting alteration, relocation, and demolition of historical resources. Compliance with the proposed General Plan Update policies and state and federal regulations would ensure that development would not result in adverse impacts to identified historic and cultural resources.

The Historic Resources Element of the General Plan Update has policies that specifically address sensitive known and potential historic resources and their protection, including:

- **HR-1.1** Continue to implement and expand upon, as feasible, the following historic resources management strategies:

    - A local Corona Historic Register that includes significant "Landmark" properties, "Historic Districts," and "Historical Markers" as prescribed in the Corona Municipal Code.

- A Corona Heritage Inventory that includes surveyed properties meeting all of the criteria as prescribed in the Corona Municipal Code to be considered a local historic resource.
- Procedures and criteria for determining the eligibility for listing properties on the Corona Historic Register and the Corona Heritage Inventory.
- Standards and regulations governing the identification, protection, restoration, maintenance, alteration, relocation, or removal of historic resources..

- **HR-1.2** Expand existing surveys of historic resources to include areas of potential historic importance not previously surveyed, and develop an ongoing program for updating the surveys on a regular basis.
- **HR-1.3** Continue to implement criteria and guidelines for the inclusion of historic resources and historic structures for the Historic Register and Heritage Inventory, including but not limited to: sites, parks, landscape elements, streets, streetlights, signs, monuments, murals, and public art.
- **HR-1.4** Continue to implement and expand upon preservation incentive programs that encourage property owners to preserve, restore, and maintain historic properties, and secure public and private funding sources to assist in said preservation.
- **HR-1.5** Support the preservation of historic resources controlled by other governmental agencies, including those related to federal, state, county, school district, and other agencies. This includes resources under the jurisdiction of the Army Corps of Engineers at Prado Basin.
- **HR-2.2** Continue to implement design guidelines for restoring historic and architecturally significant structures, including but not limited to, the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.
- **HR-2.5** Require all modifications to historic properties to be consistent with the Secretary of the Interior's "Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings" or "Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings."
- **HR-4.1** Develop an inventory and map concentrations of Heritage Street Trees, which are representative of the City's character and history, for consideration and official inclusion on the Corona Historic Register or the Heritage Inventory.
- **HR-4.2** Designate "Landmark Trees" in accordance with existing City policy and ordinance in order to preserve and protect individual specimen trees, which display particular historic value to the community.
- **HR-4.3** List applicable parks within Grand Boulevard, as resources on the Corona Historic Register, in order to preserve their historic identity and become eligible for funding for future restoration and maintenance.

- **HR-5.2** Promote the archival collection and documentation of Corona's history at the Heritage Room of the Corona Public Library, and establish this facility as the official local repository for historic and cultural resource records.

- **HR-6.5** Continue to consider and assist in the nomination of Corona's historic resources to the National Register of Historic Places, the California Historic Landmarks program, and the California Points of Historical Interest program.

- **HR-6.6** Work cooperatively with the Corona Historic Preservation Society, and other nonprofit and community organizations, in the placement of appropriate Historical Markers, monuments, or plaques to memorialize historic sites in Corona.

- **HR-6.7** Work cooperatively with the Corona Historic Preservation Society and other nonprofit organizations and individuals applying for available local, State, and federal funding for the rehabilitation and restoration of historic properties and resources..

At the time a development project is proposed adjacent to or near a known or potential historic structure or resource, the project-level CEQA document of the development project would need to identify any impacts, direct or indirect, that the project could have on the identified historic structure or resource. The CEQA Guidelines require a project that will have potentially adverse impacts on historical resources to conform to the Secretary of the Interior's Standards for the Treatment of Historic Properties.

It is also important to note that the General Plan Update is a regulatory document that sets the framework for future growth and development of the City and does not directly result in development. Before any development or redevelopment activities can occur in the City, all such activities are required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and state requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. Thus, adoption of the General Plan Update in itself would not lead to demolition or material alteration of any of these historic resources.

However, identified historic structures and sites that are potentially eligible for future historic resources listing may be vulnerable to development activities accompanying infill, redevelopment, or revitalization that would be accommodated by the General Plan Update. For instance, the placement of new buildings adjacent to a historic resource may result in indirect impacts to access, visibility, and visual context, while renovations or modifications to historic resources may deteriorate or destroy the characteristics that make those resources important or unique. In addition, other buildings or structures that could meet the NRHP criteria upon reaching 50 years of age might be impacted by development or redevelopment activity that would be accommodated by the General Plan Update.

## Climate Action Plan

The update to the City's Climate Action Plan (CAP) focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would affect historic properties

in the City because these historic homes and/or buildings would be required to comply with the City's design guidelines to ensure that these structures continue to retain their historic character, should they be retrofitted. Consequently, implementation of the City's CAP would result in less than significant impacts to historic resources upon compliance with the City's design guidelines.

**Impact 5.5-2: Future development in the City that would be accommodated by the General Plan Update could impact known and unknown archaeological resources. [Thresholds C-2]**

## General Plan

Adoption of the General Plan Update in itself would not directly affect archaeological resources. Long-term implementation of the General Plan Update land use plan could allow development (e.g., new development, infill development, redevelopment, and revitalization/restoration), including grading, of known and unknown sensitive areas. Grading and construction activities of undeveloped areas or redevelopment that requires more intensive soil excavation than in the past could potentially cause the disturbance of archeological resources. Therefore, future development that would be accommodated by the General Plan Update could potentially unearth previously unrecorded resources.

There are 70 cultural resources within the City, which include 30 prehistoric archaeological sites, 38 historic archaeological sites, 2 multicomponent resources, and 6 resources located on the border between the City of Corona and its SOI. Within the SOI, there are 86 previously recorded archaeological resources, 74 of which are prehistoric archaeological resources, 10 historic archaeological resources, and 2 multicomponent resources. There are multiple known fossil localities within the City as well as the vicinity.

Archaeological sites are protected by a wide variety of state policies and regulations enumerated under the California Public Resources Code. Cultural resources are also recognized as nonrenewable and therefore receive protection under the California Public Resources Code and CEQA. Review and protection of archaeological resources are also afforded by CEQA for individual development projects that would be accommodated by the General Plan Update, subject to discretionary actions that are implemented in accordance with the land use plan of the General Plan Update. Per Public Resources Code Section 21083.2 of CEQA, the lead agency is required to determine whether a development project may have a significant effect on archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the project-level CEQA document being prepared for the development project is required to address the issue of those resources.

Under the Historic Resources Element of the General Plan Update, the City would also implement the policies to reduce impacts of potential development on cultural resources, such as the following Policy HR-1.6, Policy HR-5.1, and Policy HR-5.2.

- **HR-3.1** Require appropriate treatment/preservation of archaeological collections in a culturally appropriate manner, in accordance with state and federal standards, and in consultation with interested Native American tribes that have traditional cultural affiliation with the project area and/or the resources affected by the project.

- **HR-3.2** Require that development proposals incorporate specific measures to identify, protect, and preserve cultural resources in the planning, environmental review, and development process.

- **HR-3.3** Archaeological resources found prior to or during construction shall be evaluated by a qualified archaeologist and appropriate mitigation measures applied, pursuant to § 21083.2 of CEQA, before the resumption of development activities. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the appropriate CHRIS information center.

- **HR-3.4** Any project that involves earth-disturbing activities in an area determined to be archaeologically or culturally sensitive shall require evaluation of the site by a qualified archaeologist. The applicant shall implement the recommendations of the archaeologist, subject to the approval of the City. Planning Department.

- **HR-3.5** Any project that involves earth-disturbing activities in an area determined to be archaeologically or culturally sensitive shall require consultation by the applicant with interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, for the purposes of determining resources impacts and appropriate mitigation to address such impacts. Applicant shall also arrange for monitoring of earth-disturbing activities by interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, if requested..

It is also important to note that the General Plan Update is a regulatory document that sets the framework for future growth and development in the City and does not result in development in and of itself. Before any development or redevelopment activities can occur in the City, they must be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and state requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Long-term implementation of the General Plan Update could allow development (e.g. infill development, redevelopment, and revitalization/restoration), including grading, of unknown sensitive areas. Grading and construction activities of undeveloped areas or redevelopment that requires more intensive soil excavation than in the past could potentially cause the disturbance of archaeological resources. Therefore, future development could potentially unearth previously unknown/unrecorded archaeological resources.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect archaeological sites in the City or SOI. Consequently, implementation of the City's CAP would result in less than significant impacts to archaeological sites.

**Impact 5.5-3: Grading activities could potentially disturb human remains. [Threshold C-3]**

### General Plan

The General Plan Update includes the following policy to minimize potential impact:

- **HR-3.8** In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area shall be protected and the project applicant immediately shall notify the Riverside County Coroner and comply with provisions of the Health and Safety Code § 7050.5, including PRC § 5097.98, if applicable. If the find is determined to be Native American human remains, the applicant shall consult with the Most Likely Descendent to determine appropriate treatment for such remains.

California Health and Safety Code, Section 7050.5; CEQA Section 15064.5; and Public Resources Code, Section 5097.98, mandate the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery. Specifically, California Health and Safety Code, Section 7050.5, requires that if human remains are discovered on a project site, disturbance of the site shall remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes or has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Although soil-disturbing activities associated with development in accordance with the General Plan Update could result in the discovery of human remains, compliance with existing law would ensure that significant impacts to human remains would not occur.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the treatment of human remains in the City or SOI. Consequently, implementation of the City's CAP would result in less than significant impacts to human remains.

## 5.5.5 Existing Regulations and Standard Conditions

### Federal

- National Historic Preservation Act of 1966 (NHPA) - Section 106 (Protection of Historic Properties)
- Archaeological Resources Protection Act of 1979
- Native American Graves Protection and Repatriation Act
- National Register of Historic Places
- Federal Land Policy and Management Act (FLPMA) of 1976

### State

- Senate Bill (SB) 18 and Assembly Bill (AB) 52
- California Historical Building Code (Title 24, Part 8)
- California Public Resources Code Sections 5020–5029.5; 5079–5079.65; 5097.9–5097.998; 5097.98
- California State Health and Safety Code, Section 7050.5
- California Government Code Sections 50280 et seq.: Mills Act

### Local

- Corona Municipal Code Chapter 17.63, *Historic Resources.*
- Corona Historical Resources Ordinance 2270
- Corona Register of Historic Resources

## 5.5.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.5-3.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.5-1** Implementation of the General Plan Update would impact historic resources
- **Impact 5.5-2** Implementation of the General Plan Update would impact archaeological resources

## 5.5.7 Mitigation Measures

### Impact 5.5-1

CUL-1 Prior to any construction activities that may affect historical resources (i.e., structures 45 years or older), a historical resources assessment shall be performed by an architectural historian or historian who meets the Secretary of the Interior's Professionally Qualified Standards (PQS) in architectural history or history. This shall include a records search to determine if any resources that may be potentially affected by the project have been previously recorded, evaluated, and/or designated in the National Register of Historic Places (NRHP), California Register of Historic Resources (CRHR), or Corona Register of Historic Resources. Following the records search, the qualified architectural historian or historian shall conduct a reconnaissance-level and/or intensive-level survey in accordance with the California Office of Historic Preservation (OHP) guidelines to identify any previously unrecorded potential historical resources that may be potentially affected by the proposed project. Pursuant to the definition of a historical resource under CEQA, potential historical resources shall be evaluated under a developed historic context.

CUL-2 To ensure that projects requiring the relocation, rehabilitation, or alteration of a historical resource not impair its significance, the *Secretary of the Interior's Standards for the Treatments of Historic Properties* shall be used to the maximum extent possible. The application of the standards shall be overseen by a qualified architectural historian or historic architect meeting the PQS. Prior to any construction activities that may affect the historical resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City of Corona.

CUL-3 If a proposed project would result in the demolition or significant alteration of a historical resource, it cannot be mitigated to a less than significant level. However, recordation of the resource prior to construction activities will assist in reducing adverse impacts to the resource to the greatest extent possible. Recordation shall take the form of Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) documentation, and shall be performed by an architectural historian or historian who meets the PQS. Documentation shall include an architectural and historical narrative; medium- or large-format black and white photographs, negatives, and prints; and supplementary information such as building plans and elevations, and/or historic photographs. Documentation shall be reproduced on archival paper and placed in appropriate local, state, or federal institutions. The specific scope and details of documentation would be developed at the project level.

CUL-4 If cultural resources that are eligible for listing to the NRHP, CRHR, or Corona Register of Historic Resources are identified within or adjacent to the proposed development, the construction limits shall be clearly flagged to assure impacts to eligible cultural resources are avoided or minimized to the extent feasible. Prior to implementing construction activities, a qualified archaeologist shall verify that the flagging clearly delineates the construction limits and eligible resources to be avoided. Since the location of some eligible cultural resources is confidential, these resources will be flagged as environmentally sensitive areas (ESA).

### Impact 5.5-2

CUL-5 To determine the archaeological sensitivity for discretionary projects within the City, an archaeological resources assessments shall be performed under the supervision of an archaeologist that meets the Secretary of the Interior's Professionally Qualified Standards (PQS) in either prehistoric or historic archaeology. The assessments shall include a California Historical Resources Information System (CHRIS) records search and a search of the Sacred Lands File (SLF) maintained by the Native American Heritage Commission (NAHC). The records searches shall determine if the proposed project has been previously surveyed for archaeological resources, identify and characterize the results of previous cultural resource surveys, and disclose any cultural resources that have been recorded and/or evaluated. A Phase I pedestrian survey shall be undertaken in areas that are undeveloped to locate any surface cultural materials.

a. If potentially significant archaeological resources are identified through an archaeological resources assessment, and impacts to these resources cannot be avoided, a Phase II Testing and Evaluation investigation shall be performed by an archaeologist who meets the PQS prior to any construction-related ground-disturbing activities to determine significance. If resources determined significant or unique through Phase II testing, and site avoidance is not possible, appropriate site-specific mitigation measures shall be established and undertaken. These might include a Phase III data recovery program that would be implemented by a qualified archaeologist and shall be performed in accordance with the Office of Historic Preservation's *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (1990) and *Guidelines for Archaeological Research Designs* (1991).

b. If the archaeological assessment did not identify potentially significant archaeological resources within the proposed General Plan area but indicated the area to be highly sensitive for archaeological resources, a qualified archaeologist shall monitor all ground-disturbing construction and pre-construction activities in areas with previously undisturbed soil. The archaeologist shall inform all construction personnel prior to construction activities of the proper procedures in the event of an archaeological discovery. The training shall be held in conjunction with the project's initial on-site safety meeting, and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the resources are evaluated for significance by an archaeologist who meets the PQS. If the discovery proves to be significant, it shall be curated with a recognized scientific or educational repository.

c. If the archaeological assessment did not identify potentially significant archaeological resources, but indicates the area to be of medium sensitivity for archaeological resources, an archaeologist who meets the PQS shall be retained on an on-call basis. The archaeologist shall inform all construction personnel prior to construction activities about the proper procedures in the event of an archaeological discovery. The training shall be held in conjunction with the project's initial on-site safety meeting, and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the on-call archaeologist is contacted. If the discovery proves to be significant, it shall be curated with a recognized scientific or educational repository.

## 5.5.8 Level of Significance After Mitigation

### Impact 5.5-1

Policies included in the General Plan as well as Mitigation Measures CUL-1 through CUL-4 would reduce potential impacts associated with historic resources. However, if a proposed project would result in the demolition or significant alteration of a historical resource, it cannot be mitigated to a less than significant level. As a result, impacts on historic resources as a result of future development in accordance with the proposed General Plan Update are ***significant and unavoidable***.

### Impact 5.5-2

Policies the incorporated into the General Plan and Mitigation Measure CUL-5 would require specific measures to identify, protect, and preserve cultural resources such as conducting site-specific archeological resources studies, monitoring of earth-disturbing activities, and evaluation and recovery of cultural resources found during construction activities. Mitigation Measure CUL-5 would reduce potential impacts associated with archaeological resources to a level that is less than significant by avoiding or recovering the archaeological resource(s). Therefore, no significant adverse impacts relating to archaelogical resources have been identified.

## 5.5.9 References

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Riverside County Planning Department. 2015. Riverside County General Plan. *Chapter 5 Multiuse Open Space Element*. Accessed February 22, 2018. http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx.

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# 5.6 ENERGY

## 5.6.1 Environmental Setting

Section 21100(b)(3) of CEQA requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize significant effects on the environment, including but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting, and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives.

In accordance with Appendix F and G of the State CEQA Guidelines, this EIR includes relevant information and analyses that address the energy implications of the General Plan Update and summarize its anticipated energy needs, impacts, and conservation measures. Information found herein, as well as related aspects of the Update's energy implications, are discussed in greater detail elsewhere in this EIR, including Chapter 3, *Project Description*, and Sections 5.3, *Air Quality*, 5.8, *Greenhouse Gas Emissions*, and 5.17, *Transportation.*

#### 5.6.1.1 REGULATORY FRAMEWORK

### Federal Regulations

#### *Energy Independence and Security Act of 2007*

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The Act sets increased Corporate Average Fuel Economy Standards; the Renewable Fuel Standard; appliance energy efficiency standards; building energy efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration (USEPA 2019b).

#### *Update to Corporate Average Fuel Economy Standards (2010/2012)*

The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers were required to cut greenhouse gas (GHG) emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued new standards in 2012 for model years 2017 to 2025 that will require a fleet average of 54.5 miles per gallon in 2025. While the US Environmental Protection Agency (EPA) is reexamining the

2017–2025 emissions and CAFE standards, a consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and provides industry the certainty needed to make investments and create jobs. This commitment means that the auto companies party to the voluntary agreement will only sell cars in the United States that meet these standards (CARB 2019).

## State Regulations

### *Renewables Portfolio Standard*

#### ***Senate Bills 1078, 107, X1-2, and Executive Order S-14-08***

The California Renewables Portfolio Standard (RPS) Program was established in 2002 under SB 1078 (Sher) and 107 (Simitian). The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. Initially under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08 was signed in November 2008, which expanded the state's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). The California Public Utilities Commission is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the State. Based on the 3rd quarter 2014 report, the three largest retail energy utilities provided an average of 20.9 percent of its supplies from renewable energy sources. Since 2003, 8,248 megawatts (MW) of renewable energy projects have started operations (CPUC 2014).

#### ***Senate Bill 350***

Senate Bill 350 (de Leon), was signed into law September 2015. SB 350 establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

#### ***Senate Bill 100***

On September 10, 2018, Governor Brown signed SB 100, which replaces the SB 350 requirement of 45 percent renewable energy by 2027 with the requirement of 50 percent by 2026 and also raises California's RPS requirements for 2050 from 50 percent to 60 percent. SB 100 also establishes RPS requirements for publicly owned utilities that consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Furthermore, the bill also establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

### *State Alternative Fuels Plan*

AB 1007 requires the California Energy Commission (CEC) to prepare a plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan was prepared by the CEC with the California Air Resources Board (CARB) and in consultation with other federal, state, and local agencies to reduce petroleum consumption; increase use of alternative fuels (e.g., ethanol, natural gas, liquefied petroleum gas, electricity, and hydrogen); reduce GHG emissions; and increase in-state production of biofuels. The State Alternative Fuels Plan recommends a strategy that combines private capital investment, financial incentives, and advanced technology that will increase the use of alternative fuels; result in significant improvements in the energy efficiency of vehicles; and reduce trips and vehicle miles traveled through changes in travel habits and land management policies. The Alternative Fuels and Vehicle Technologies Funding Program legislation (AB 118, Statutes of 2007) proactively implements this plan (CEC 2007).

### *Appliance Efficiency Regulations*

California's Appliance Efficiency Regulations (California Code of Regulations [CCR] Title 20, Parts 1600–1608) contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California. These standards are updated regularly to allow consideration of new energy efficiency technologies and methods (CEC 2017).

### *Title 24, Part 6, Energy Efficiency Standards*

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2016 (24 CCR Part 6). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards, which were recently adopted on May 9, 2018, go into effect starting January 1, 2020.

The 2016 Standards improve upon the previous 2013 Standards for new construction of and additions and alterations to residential and nonresidential buildings. Under the 2016 Standards, residential and nonresidential buildings are generally 28 and 5 percent more energy efficient than the 2013 Standards, respectively (CEC 2015a). Although the 2016 standards do not achieve zero net energy, they get very close to the state's goal and take important steps toward changing residential building practices in California.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC

2018a). Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

### *Title 24, Part 11, Green Building Standards*

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and were last updated in 2016. The 2016 Standards became effective on January 1, 2017. On October 3, 2018, the CEC adopted the voluntary standards of the 2019 CALGreen, which become effective January 1, 2020.

Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection; storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency (CBSC 2019b).

### *Heavy-Duty (Tractor-Trailer) GHG Regulation*

The tractors and trailers subject to this regulation must either use EPA SmartWay-certified tractors and trailers or retrofit their existing fleet with SmartWay-verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low–rolling resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay-verified, low–rolling resistance tires. There are also requirements for trailers to have low–rolling resistance tires and aerodynamic devices.

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay consists of three components:

- **SmartWay Transport Partnership:** Freight shippers, carriers, logistics companies and other stakeholders partner with EPA to measure, benchmark and improve logistics operations so they can reduce their environmental footprint.

- **SmartWay Brand:** Through SmartWay technology verification and branding, the EPA has accelerated availability, adoption, and market penetration of fuel-saving technologies and operational practices while helping companies save fuel, lower costs, and reduce adverse environmental impacts.

- **SmartWay Global Collaboration:** The EPA works with a broad range of national and global organizations to harmonize sustainability accounting methods in the freight sector. SmartWay also provides support to global policy makers that wish to model transportation sustainability programs after the SmartWay program. (USEPA 2019a)

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined that the following types of technologies provide fuel-saving and/or emission-reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies—i.e., less idling of the engine when it is not needed—would reduce fuel consumption.

- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.

- Low–rolling resistance tires can roll longer without slowing down, which reduces the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel will eventually slow down because of this resistance.

- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc. that would reduce emissions.

- Federal excise tax exemptions. (USEPA 2019c)

## Local Regulations

### *City of Corona Climate Action Plan*

The City of Corona's 2012 Climate Action Plan (CAP) provides direction for the reduction of GHG emissions from sources under the City's jurisdiction in coordination with the City's land use decisions from the General Plan. The 2012 CAP provides measures to meet the goal of reducing community GHG emissions to a level 20 percent below projected business-as-usual emissions for 2020 (Corona 2012).

Furthermore, the 2012 CAP aims to meet the goals set forth in EO S-03-05 to reduce GHG emissions to a level 80 percent below 1990 levels by 2050.

To meet the established 2020 Reduction Target, the current CAP includes various reduction measures across several sectors that include transportation, energy, water, solid waste, and agriculture. The reduction measures encompass both state- and local-based measures. Identified state-based measures related to energy include compliance with the Building Energy Efficiency Standards and CALGreen and utilities meeting the RPS. The 2012 CAP also includes energy-related local-based measures, which are measures the City can implement that are beyond statewide measures. For example, Measure R2-E1 and R2-E5 require new residential and commercial buildings to be 20 percent more energy efficient than the Title 24 standards, respectively. (Corona 2012). Other energy-related local measures include supporting energy efficiency and renewable energy retrofits for existing homes and commercial buildings (see Measures R2-E3, R2-E4, and R2-E7). The 2012 CAP also includes measures that support increasing the incorporation of renewable energy systems into new residential and non-residential development projects (see Measures R2-E2 and R2-E6).

### 5.6.1.2 EXISTING CONDITIONS

#### Electricity

##### *Southern California Edison*

Southern California Edison (SCE) provides electrical service to most of Corona and its SOI, using numerous power plants throughout California and in other western states. As of 2017, ten substations serve Corona and the SOI, of which eight are owned and operated by SCE. An additional substation is proposed in Corona and, if approved by the California Public Utility Commission, is expected to be operational and in service by 2021. Most major electricity transmission lines are also maintained by SCE.

Total electricity consumption in SCE's service area, which spans much of southern California from Orange and Riverside counties on the south to Santa Barbara County on the west to Mono County on the north, in gigawatt-hours was 102,521 GWh in 2018 a (CEC 2015b; CEC 2019b); one GWh is equivalent to one million kilowatt-hours. Sources of electricity sold by SCE in 2017, the latest year for which data are available, were:

- 32 percent renewable, consisting mostly of solar and wind
- 8 percent large hydroelectric
- 20 percent natural gas
- 6 percent nuclear
- 34 percent unspecified sources—that is, not traceable to specific sources (SCE 2018)[1]

##### *Corona Electric Utility*

On April 4, 2001, the Corona's City Council passed Resolution No. 2001-25, which established a municipally owned electric utility. In August 2001, this electric utility, which is part of the Corona Department of Water

[1] The electricity sources listed above reflect changes after the 2013 closure of the San Onofre Nuclear Generating Station, which is owned by SCE.

and Power (DWP), entered into an agreement with SCE to provide retail services as an electric services provider. Corona DWP buys and sells power on behalf of the City's municipal electric accounts and properties within specific service areas.

### *Estimated Existing Electricity Demand*

Total estimated existing (2018) electricity demand in the City and SOI based on data provided by SCE and Corona DWP is estimated at 1,412,642,823 kilowatt hours (kWh) per year, as shown below in Table 5.6-1, *Estimated Existing Electricity Demand.*

Table 5.6-1 Estimated Existing Electricity Demand

| Area | Electricity Usage, kWh per year (Subtotal) |
|---|---|
| City | |
| Residential | 371,670,609 |
| Nonresidential | 821,574,727 |
| Municipal | 85,334,805 |
| SOI[1] | |
| Residential | 83,753,212 |
| Nonresidential | 50,309,471 |
| Total | 1,412,642,823 |

[1] Electricity demand for SOI was determined by dividing annual use by residents or employees within the City of Corona boundaries.
Residential: 2,248 kWh/resident
Nonresidential: 11,576 kWh/employee

## Natural Gas

Southern California Gas Company (SoCalGas) provides natural gas service in the City of Corona and SOI and offers a variety of rebate programs to encourage energy-efficient home improvements and the purchase of energy-saving appliances. It also administers a no-cost, energy-saving installation program regulated by the California Public Utilities Commission. SoCalGas maintains transmission and distribution lines throughout the City and SOI.

The service area of SoCalGas spans much of the southern half of California, from Imperial County in the southeast to San Luis Obispo County in the northwest to part of Fresno County in the north to Riverside County and most of San Bernardino County in the east (CEC 2015c). Total natural gas supplies available to SoCalGas for years 2018 and 2019 are 3,055 million cubic feet per day (MMcf/day) and 3,385 MMcf/day, respectively (CGEU 2018). Total natural gas consumption in SoCalGas's service area was 719,423 MMcf for 2018, which is equivalent to 1,971 MMcf/day (CEC 2019c).

### *Existing Estimated Natural Gas Demands*

Existing natural gas demands in the City and SOI based on data provided by SoCalGas are estimated at 43.9 million therms per year, as shown below in Table 5.6-2, *Estimated Existing Natural Gas Demand.*

Table 5.6-2 Estimated Existing Natural Gas Demand

| Area | Natural Gas Usage, therms per year (Subtotal) |
|---|---|
| City | |
| Residential | 19,377,837 |
| Nonresidential | 19,858,113 |
| SOI[1] | |
| Residential | 3,563,617 |
| Nonresidential | 1,145,853 |
| Total | 43,945,421 |

[1] Gas demand for SOI was determined by dividing annual use by residents or employees within the City of Corona boundaries.
Residential: 96 therms/resident
Nonresidential: 264 therms/employee

## Transportation Fuels

Table 5.6-3, *Existing Operation-Related Annual Fuel Usage*, shows the fuel usage associated with vehicle miles traveled (VMT) currently generated under existing baseline conditions based on fuel usage data obtained from EMFAC2017, Version 1.0.2, and VMT data provided by Fehr & Peers (see Appendix I). VMT is based on vehicle trips beginning and ending in the City and SOI boundaries and from external/internal trips (i.e., trips that either begin or end in the City and SOI). The table provides fuel usage associated with the full VMT associated with the City and SOI and for VMT that incorporates the accounting rules recommended by CARB's Regional Targets Advisory Committee (RTAC) created under Senate Bill 375. Under the RTAC accounting rules, only 50 percent of the trip length associated with external/internal and internal/external trips are accounted for in determining total VMT.[2]

Table 5.6-3 Existing Operation-Related Annual Fuel Usage

| | Gas | | Diesel | | Compressed Natural Gas | | Electricity | |
|---|---|---|---|---|---|---|---|---|
| | VMT | Gallons | VMT | Gallons | VMT | Gallons | VMT | kWh |
| Full VMT | 2,537,668,340 | 104,432,661 | 243,354,087 | 26,083,846 | 2,129,944 | 579,469 | 9,554,194 | 3,211,752 |
| VMT Per RTAC | 1,335,955,575 | 54,978,577 | 128,113,767 | 13,731,841 | 1,121,309 | 305,062 | 5,029,806 | 1,690,827 |

Source: EMFAC2017 Version 1.0.2.
Note: VMTs based on daily VMT provided by Fehr & Peers. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

[2] For accounting purposes, there are three types of trips: (1) Vehicle trips that originate and terminate within the City and SOI (Internal-Internal, I-I). Using the accounting rules established by RTAC, 100 percent of the length of these trips, and their emissions, are attributed to the City and SOI. (2) Vehicle trips that either originate or terminate (but not both) within the City and SOI (Internal-External or External-Internal, I-X and X-I). Using the accounting rules established by RTAC, 50 percent of the trip length for these trips is attributed to the City and SOI. (3) Vehicle trips that neither originate nor terminate within the City and SOI. These trips are commonly called pass-through trips (External-External, X-X). Using the accounting rules established by RTAC, these trips are not counted towards the City and SOI VMT.

## 5.6.2 Thresholds of Significance

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

E-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

E-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

## 5.6.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential energy impacts as a result of implementation of the proposed project.

### Circulation Element

#### *Local Thoroughfares and Routes*

- **CE-1.4** Design and employ traffic control measures to ensure City streets and roads function with safety and efficiency.

- **CE-1.7** Limit driveway and local street access on arterial streets to maintain a desired quality of traffic flow. Wherever possible, consolidate driveways and implement access controls during redevelopment of adjacent parcels.

#### *Transportation Management*

- **CE-3.1** Implement and maintain traffic signal coordination and advanced traffic management strategies throughout the City to the maximum extent practicable and integrate signal systems with adjacent jurisdictions and Caltrans.

- **CE-3.2** Implement, maintain, and enforce the traffic demand and system management recommendations in the South Coast Air Quality Management District's Air Quality Management Plan and in the Riverside County Congestion Management Program.

- **CE-3.3** Encourage employers to reduce vehicular trips by offering to employees commute trip reduction programs, such as transit fare subsidies, alternative work schedules and telecommuting, employer-sponsored van pools or shuttles, ride share programs, and bike share.

#### *Public Transportation*

- **CE-4.1** Maintain local fixed-route and demand-responsive transit service to ensure mobility within Corona and to ensure that users have adequate access to public facilities, services, and employment options.

- **CE-4.2** Work with the Riverside Transit Agency to identify needs for additional bus services and enhancements to existing services.
- **CE-4.3** Encourage the development of additional regional public transportation services and facilities, including park-and-ride near the SR-91 and I-15 freeways and mobility hubs at key transit stations.
- **CE-4.4** Ensure public transit opportunities (e.g., fixed-route buses, paratransit) for elderly and disabled persons and accessibility of such services by elderly and disabled persons.
- **CE-4.5** Encourage employers to reduce single-occupant vehicular trips by providing employee incentives (e.g., reduced rate transit passes).
- **CE-4.6** Require new development to provide transit facilities, such as bus shelters and turnouts, where deemed necessary, to encourage the use of transit and other alternative forms of transportation.
- **CE-4.7** Preserve options for expanding future transit use when designing improvements for roadways or redeveloping major developments and including areas for transit facilities.
- **CE-4.8** Encourage access to and the expansion of regional rail transportation facilities and services at the Metrolink stations to increase ridership.
- **CE-4.9** Encourage the development of bus rapid transit systems along major transportation corridors where feasible.
- **CE-4.10** Improve first/last mile connections to improve transit use and accessibility. Explore use of transportation network companies, micro-transit, and other emerging technologies to strengthen the transit system.

### *Bicycle and Pedestrian Facilities*

- **CE-5.1** Provide for safety of bicyclists, equestrians, and pedestrians by adhering to national standards and uniform practices; adhere to accessibility requirements for people with disabilities.
- **CE-5.2** Maintain existing pedestrian facilities and encourage new development to provide walkways between and through developments.
- **CE-5.3** Provide for safe accessibility to and use of pedestrian facilities by people with disabilities to implement accessibility requirements under the American with Disabilities Act.
- **CE-5.4** Develop bicycle routes in accordance with the City's adopted Bicycle Master Plan and implement other elements of that plan.
- **CE-5.5** Develop and maintain a bikeway system that provides connections to routes of neighboring jurisdictions and regional bikeways.

- **CE-5.6** Encourage new and existing development to provide accessible and secure areas for bicycle storage. Provide bicycle racks or storage facilities at public facilities and require bicycle parking, storage, and other support facilities as part of new office and retail developments.

- **CE-5.7** Use easements and/or rights-or-way along flood control channels, public utilities, railroads, and streets wherever possible for bikeways and equestrian and hiking trails.

- **CE-5.8** Improve bicycling and pedestrian safety by minimizing conflict points (e.g., bicycle and vehicle crossings) with motorized traffic, separating bike routes and truck routes where possible, or adding and improving existing facilities with buffers/barriers to separate bikes from vehicle lanes.

- **CE-5.9** Coordinate with the Riverside County General Plan and the Santa Ana River Trails Plan to create an uninterrupted Class I bicycle route through Corona that connects to the Santa Ana River Trail in surrounding cities.

- **CE-5.10** Encourage and support safe bicycle riding on City streets. Provide bicycle safety and education programs through public outreach. Support future bikeway designs that minimize bicycle conflicts with vehicles, separate bikeways from vehicles where possible, and lower bicycle level of stress.

### *Parking*

- **CE-7.3** Encourage employers to include strategic parking provisions in new developments, where feasible, to encourage the use of transit and other modes of travel rather than single-occupancy autos.

## Land Use Element

### *Type, Distribution, and Form of Land Uses*

- LU-1.2 Emphasize the development of uses that sustain Corona as a cohesive, distinct, and self-sustaining **community** and minimize the need for residents to travel to surrounding communities for retail goods, services, and employment.

### *Community Quality and Sense of Space*

- **LU-6.1** Promote sustainable features in new construction and significant renovations, including the use of locally sourced, recycled, and sustainable-sourced building materials, energy- and water-efficient building design, integrated renewable energy and energy storage systems, and waste minimization during construction.

- **LU-6.2** Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through:

    - Site design—concentration and intermixing of development to minimize vehicular trips and promote walking and building orientation for solar access and heat gain and loss

- Landscaping—drought-tolerant species, use of recycled water for irrigation, and other purposes
- Capture of rainwater and re-use on site
- Building design and construction materials—energy-and water efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques

### *Residential Neighborhoods*

- **LU-8.2** Provide opportunities for the development of new housing adjacent to the Downtown and the Sixth Street corridor, which may include a variety of housing types, including mixed use projects, that integrate housing with commercial and office uses..
- **LU-8.3** Provide opportunities for housing that are in pace with adopted state legislation and allow for a variety of housing types such as integrating residential with commercial and office developments, near activity centers and in transit oriented areas near the Metrolink Station.
- **LU-8.4** Provide opportunities for "live-work" development to accommodate artists, craft persons, and professionals working from home as a buffer between residential and nonresidential uses in Downtown, North Main Street, and adjoining commercial and industrial corridors and districts.
- **LU-10.6** Establish a multi-use trail system that connects the rural and estate neighborhoods adjoining open spaces and parklands. These may be developed for pedestrians, bicycles, and/or for horseback riding where allowed by zoning.

### *Commercial and Office Districts*

- **LU-11.2** Maintain a range of retail commercial and office uses and districts in the City that are differentiated by their functional role, customer base, and physical form and character. Such districts include
  - Mixed-use Downtown that serves as the center of Corona's identity and activity; provides a wide range of retail, commercial, and specialty goods; and is designed and developed to emphasize pedestrian activity.
  - Community retail districts that contain larger-format uses, national retailers, restaurants, and overnight accommodations, that serve the region and the local community, generally located in proximity to freeway off-ramps.
  - Neighborhood shopping districts providing basic goods and services, such as grocery stores and personal services, within easy access and that are intended to serve the needs of residents living in nearby neighborhoods.
- **LU-11.6** Require that transit-supporting facilities, such as bus turnouts, passenger drop-offs, and shelters, be incorporated in new commercial centers or when subject to major renovation and

improvement, where appropriate to support local, citywide, and regional transit systems. The location and type of facility should be coordinated with transit agencies.

### *Industrial Districts*

- **LU-12.7** Regulate the development of industrial uses (consistent with local regulation and state law) that use, store, produce, or transport toxic and hazardous materials; generate unacceptable levels of air or noise pollution; or result in other adverse impacts.

- **LU-13.1** Accommodate mixed-use projects that integrate housing with retail, office, and other uses within the same structure or on the same site, or the development of the property exclusively for commercial and office uses in accordance with the land use plan's designations and applicable density standards and design and development policies.

- **LU-13.2** Limit retail commercial and professional office uses within a mixed-residential-commercial/office use development to those uses that are compatible with residential uses.

- **LU-13.3** Require that adequate open space and, for larger projects, recreational facilities be incorporated into mixed-use development projects to meet the need of their residents and improve overall aesthetics.

## Housing Element

- **HE-1.4** Support the development of sustainable projects that reduce demand for water and energy resources, reduce commute times and operational costs, and provide for transit..

## Environmental Resources Element

### *Air Resources*

- **ER-12.4** Continue to expand the City-owned fleet of vehicles to alternative fuels, such as methanol or other clean-burning energy sources, as technology becomes feasible and cost-effective.

- **ER-12.14** Reduce energy consumed by commercial and residential uses by requiring the use and installation of energy conservation features in all new construction projects and wherever feasible, retrofitting existing and redevelopment projects.

- **ER-13.2** Encourage the maximum feasible energy efficiency in site design, building orientation, landscaping, and utilities/infrastructure for all development and redevelopment projects (residential, commercial, industrial, and public agency) to support GHG emissions reductions.

- **ER-13.3** Evaluate opportunities to reduce energy use and the urban heat island effect through site and building design, materials and landscaping, such as reflective roofs or pavement, vegetated roofs, pervious pavement, shade trees, and re-vegetation of paved areas.

- **ER-13.4** Support the increase of clean energy supply to existing and new development and municipal facilities through means to include, but not be limited to: onsite or other local renewable energy sources for new and existing buildings and infrastructure.

## Infrastructure Element

### *Resource Conservation*

- **IU-2.1** Continue to implement the City's water conservation and reuse efforts; review these programs regularly, and modify them as appropriate and feasible.

- **IU-2.2** Establish guidelines and standards for water conservation and actively promote use of water-conserving devices and practices in new construction, major alterations and additions to existing buildings, and retrofitting of irrigation systems where feasible.

- **IU-2.3** Require incorporation of best available technologies for water conservation, internally and externally, in new construction and associated site design.

- **IU-2.4** Expand the recycled water program to provide water for landscaped medians and other appropriate open spaces along SR-91 and I-15, in coordination with Caltrans when feasible.

- **IU-2.5** Require that sewer flows be minimized in existing and future developments through water conservation and recycling efforts.

- **IU-2.6** Encourage the use of recycled water by industrial, commercial, and institutional users through the use of incentives such as differential pricing; require recycled water use for landscaped irrigation, grading, and other noncontact uses in new projects, where feasible.

- **IU-2.7** Require the use of recycled water for landscaped irrigation, grading, and other noncontact uses in new developments, parks, golf courses, sports fields, and comparable uses, where feasible.

- **IU-2.8** Continue to provide and support public educational efforts to residents, business, and students regarding the importance of water conservation and recycled water use.

- **IU-2.9** Require that grading plans be designed and implemented to reduce stormwater runoff by capturing rainwater onsite and storing on a temporary, short-term basis to facilitate groundwater recharge rather than relying solely on community drainage facilities.

- **IU-2.10** Require the use of rainwater capture and storage facilities, techniques, and improvements in residential and nonresidential developments to further objectives for water conservation.

### *Energy*

- **IU-7.1** Require that new development is approved contingent upon its ability to be served with adequate natural gas, energy facilities, and other critical infrastructure.

- **IU-7.2** Coordinate with energy providers and the City Department of Power and Water to ensure that adequate services and facilities will meet SB 100 guidelines and the demand of existing and future developments, and be compatible with adjacent uses in Corona.

- **IU-7.3** Encourage energy providers and regulators to evaluate and maintain the safety and efficiency of utility facilities such as gas pipelines, electric lines, and transformers.

- **IU-7.4** Consider adopting a Community Choice Aggregation Ordinance or work with utility providers to offer renewable energy purchasing at a reduced cost to consumers.

- **IU-7.5** Continue to require and regulate the undergrounding of electrical poles and wires in accordance with the Corona Municipal Code.

- **IU-7.6** Continue to expand the supply of rooftop solar energy systems at public facilities and improve energy efficiency in City operations and capital improvements.

- **IU-7.7** Encourage the reduction of energy consumption through passive solar building orientation as well as the installation of rooftop solar energy systems and energy-efficient technologies.

- **IU-7.8** Continue to inform the community of rebates and other supportive programs for energy-efficient building improvements, appliances, and alternative energy systems.

## 5.6.4 Environmental Impacts

### 5.6.4.1 METHODOLOGY

Based on CEQA Guidelines Appendix F, Energy Conservation, in order to ensure energy implications are considered in project decisions, CEQA identifies that EIRs include a discussion of the potential impacts of proposed projects, with particular emphasis on avoiding or reducing wasteful, unnecessary, or inefficient use of energy resources as applicable. Environmental effects may include a proposed project's energy requirements and its energy use efficiencies by amount and fuel type during demolition, construction, and operation; the effects of a proposed project on local and regional energy supplies; the effects of a proposed project on peak and base period demands for electricity and other forms of energy; the degree to which a proposed project complies with existing energy standards; the effects of a proposed project on energy resources; and the proposed project's projected transportation energy use requirements and its overall use of efficient transportation alternatives, if applicable. The energy and fuel usage information provided in this section are based on

- **Energy:** Energy use for residential and nonresidential land uses in the City and SOI are based on natural gas usage data provided by SoCalGas and electricity usage data provided by SCE and the Corona DWP and can be found in Appendix D. Natural gas and electricity use are based on five-year (2012–2016) averages to account for fluctuation in annual use as a result of natural variations in climate. Year 2040 residential energy and nonresidential energy forecasts are adjusted for increases in population and employment, respectively, in the City and SOI under the General Plan Update.

- **On-Road Vehicle Fuel Usage:** Fuel usage associated with VMT associated with the City and SOI are based on fuel usage data obtained from EMFAC2017, Version 1.0.2, for calendar years 2018 and 2040 and on VMT data provided by Fehr & Peers (see Appendix I).

### 5.6.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.6-1: Implementation of the General Plan Update would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. [Threshold E-1])**

#### General Plan

##### *Short-Term Construction Impacts*

Development projects constructed under the General Plan Update would create temporary demands for electricity. Natural gas is not generally required to power construction equipment, and therefore is not anticipated during construction phases. Electricity use would fluctuate according to the phase of construction. Additionally, it is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities.

Development projects would also temporarily increase demands for energy associated with transportation. Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. It is anticipated that the majority of off-road construction equipment, such as those used during demolition and grading, would be gas or diesel powered. In addition, all operation of construction equipment would cease upon completion of project construction. Furthermore, the construction contractors are anticipated to minimize nonessential idling of construction equipment during construction in accordance with Section 2449 of 13 CCR Article 4.8, Chapter 9. Such required practices would limit wasteful and unnecessary energy consumption. Projects within the City and SOI would be similar to projects currently in development within the City of Corona. No projects consisting of multiple phases over an extended period of time are anticipated to occur.

##### *Long-Term Impacts During Operation*

Operation of new development projects accommodated under the General Plan Update would create additional demands for electricity and natural gas compared to existing conditions. Operational use of electricity and natural gas would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems, use of on-site equipment and appliances; and lighting.

### *Nontransportation Energy*

As previously stated, the existing electricity use within the City and SOI would total 1,412,642,823 kWh annually. Electrical service to the City and SOI would be provided by SCE and Corona DWP through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 5.6-4, *Year 2040 Forecast Electricity Consumption*, by horizon year 2040, electricity use in the City and SOI would increase by 454,089,365 kWh/year, or approximately 32 percent, from existing conditions.

Table 5.6-4 Year 2040 Forecast Electricity Consumption

| Area | Electricity Usage, kWh per year (Subtotal) | | |
|---|---|---|---|
| | Existing Baseline[1] | Horizon Year 2040 Forecast[2] | Net Change |
| City | | | |
| Residential | 371,670,609 | 413,743,542 | 42,072,933 |
| Nonresidential | 821,574,727 | 976,959,914 | 155,385,188 |
| Municipal | 85,334,805 | 96,940,712 | 11,605,906 |
| SOI | | | |
| Residential | 83,753,212 | 123,500,629 | 39,747,417 |
| Nonresidential | 50,309,471 | 255,587,392 | 205,277,921 |
| Total | 1,412,642,823 | 1,866,732,188 | 454,089,365 |

Notes:
1 Electricity usage is provided by SCE and Corona Department of Water and Power.
2 Residential energy and nonresidential energy forecasts are adjusted for increases in housing and employment, respectively, in the City and SOI and do not account for reductions due to increase in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

As shown in Table 5.6-5, *Year 2040 Forecast Natural Gas Consumption*, existing natural gas use in the City and SOI would total 43,945,421 therms annually. By 2040, natural gas use in the City and SOI would increase by 1,239,875 therms annually, or approximately 3 percent, from existing conditions.

Table 5.6-5 Year 2040 Forecast Natural Gas Consumption

| Area | Natural Gas Usage, therms per year (Subtotal) | | |
|---|---|---|---|
| | Existing Baseline[1] | Horizon Year 2040 Forecast[2] | Net Change |
| City | | | |
| Residential | 19,377,837 | 21,571,399 | 2,193,562 |
| Nonresidential | 19,858,113 | 23,613,897 | 3,755,783 |
| SOI | | | |
| Residential | 3,563,617 | 5,254,831 | 1,691,214 |
| Nonresidential | 1,145,853 | 5,821,282 | 4,675,429 |
| Total | 43,945,421 | 45,185,296 | 1,239,875 |

Note:
1 Natural gas usage data provided by SoCalGas.
2 Residential energy and nonresidential energy forecasts are adjusted for increases in housing and employment, respectively, in the City and SOI and do not account for reductions due to increase in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

While the electricity and natural gas demand for the City and SOI would increase compared to existing conditions, developments accommodated under the General Plan Update would be required to comply with

the current and future updates to the Building Energy Efficiency Standards and CALGreen, which would contribute in reducing the energy demands shown in Tables 5.6-3 and 5.6-4. New and replacement buildings in compliance with these standards would generally have greater energy efficiency than existing buildings. It is anticipated that each update to the Building Energy Efficiency Standards and CALGreen would result in greater building energy efficiency and move closer toward buildings achieving zero net energy.

In addition to the Building Energy Efficiency Standards and CALGreen, the General Plan Update includes the following policies to increase energy efficiency and reduce wasteful, inefficient use of energy resources:

- **LU-6.2** Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through:
    - Site design—concentration and intermixing of development to minimize vehicular trips and promote walking and building orientation for solar access and heat gain and loss
    - Landscaping—drought-tolerant species, use of recycled water for irrigation, and other purposes
    - Capture of rainwater and re-use on site
    - Building design and construction materials—energy-and water efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques
- **ER-12.14** Reduce energy consumed by commercial and residential uses by requiring the use and installation of energy conservation features in all new construction projects and wherever feasible, retrofitting existing and redevelopment projects.
- **ER-13.2** Encourage the maximum feasible energy efficiency in site design, building orientation, landscaping, and utilities/infrastructure for all development and redevelopment projects (residential, commercial, industrial, and public agency) to support GHG emissions reductions.
- **ER-13.3** Evaluate opportunities to reduce energy use and the urban heat island effect through site and building design, materials and landscaping, such as reflective roofs or pavement, vegetated roofs, pervious pavement, shade trees, and re-vegetation of paved areas.
- **IU-7.2** Coordinate with energy providers and the City Department of Power and Water to ensure that adequate services and facilities will meet SB 100 guidelines and the demand of existing and future developments, and be compatible with adjacent uses in Corona.
- **IU-7.3** Encourage energy providers and regulators to evaluate and maintain the safety and efficiency of utility facilities such as gas pipelines, electric lines, and transformers.
- The General Plan Update also includes the following proposed policies that would support increasing the use of renewable energy.

- **ER-13.4** Support the increase of clean energy supply to existing and new development and municipal facilities through means to include, but not be limited to: onsite or other local renewable energy sources for new and existing buildings and infrastructure.

- **IU-7.4** Consider adopting a Community Choice Aggregation Ordinance or work with utility providers to offer renewable energy purchasing at a reduced cost to consumers.

- **IU-7.6** Continue to expand the supply of rooftop solar energy systems at public facilities and improve energy efficiency in City operations and capital improvements.

- **IU-7.7** Encourage the reduction of energy consumption through passive solar building orientation as well as the installation of rooftop solar energy systems and energy-efficient technologies.

- **IU-7.8** Continue to inform the community of rebates and other supportive programs for energy-efficient building improvements, appliances, and alternative energy systems.

- Overall, compliance with the Building Energy Efficiency Standards and CALGreen and implementation of proposed energy-related policies to guide development of land uses accommodated under the General Plan Update would contribute in minimizing nonrenewable energy demands by increasing energy efficiency and renewable energy use.

### *Transportation Energy*

The City and SOI would consume transportation energy (e.g., gasoline, diesel, compressed natural gas (CNG), and electricity) during operations from the use of motor vehicles. As shown in Table 5.6-6, *Operation-Related Annual Fuel Usage: Full VMT*, implementation of the General Plan Update would generally increase VMT across the different fuel type categories overall when compared to the existing baseline conditions (i.e., "Net Change from Existing Baseline"). However, while CNG usage would result in a net increase, overall gasoline and diesel fuel usage would generally decrease by 20,974,690 gallons and 1,265,558 gallons, respectively.

Table 5.6-6 Operation-Related Annual Fuel Usage: Full VMT

| Fuel Type | Existing Baseline | Project Horizon Year 2040 | Net Change from Existing Baseline |
|---|---|---|---|
| **Gasoline** | | | |
| VMT[1] | 2,537,668,340 | 3,184,553,773 | 646,885,433 |
| Gallons | 104,432,661 | 83,637,971 | -20,974,690 |
| Miles Per Gallon | 24.30 | 38.08 | 13.78 |
| **Diesel** | | | |
| VMT[1] | 243,354,087 | 330,398,780 | 87,044,693 |
| Gallons | 26,083,846 | 24,818,288 | -1,265,558 |
| Miles Per Gallon | 9.33 | 13.31 | 3.98 |
| **Compressed Natural Gas** | | | |
| VMT[1] | 2,129,944 | 4,081,551 | 1,951,607 |
| Gallons | 579,469 | 1,186,827 | 607,357 |
| Miles Per Gallon | 3.68 | 3.44 | -0.24 |
| **Electricity** | | | |
| VMT[1] | 9,554,194 | 149,557,715 | 140,003,522 |
| kWh | 3,211,752 | 42,131,229 | 38,919,478 |
| Miles Per kWh | 2.97 | 3.55 | 0.58 |

Source: EMFAC2017 Version 1.0.2.
[1] Based on daily VMT provided by Fehr & Peers. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

Table 5.6-7, *Operation-Related Annual Fuel Usage: VMT With RTAC Methodology*, shows the estimated fuel usage based on VMT in which the RTAC accounting rules are applied. As shown in the table, the trends in the overall net change in fuel usage would be similar to the trends shown in Table 5.6-6. Net change from existing baseline conditions would also result in an increase in VMT across all fuel types, but overall gasoline and diesel consumption would decrease.

Table 5.6-7 Operation-Related Annual Fuel Usage: VMT With RTAC Methodology

| Fuel Type | Existing Baseline | Project Horizon Year 2040 | Net Change from Existing Baseline |
|---|---|---|---|
| Gasoline | | | |
| VMT[1] | 1,335,955,575 | 1,670,406,808 | 334,451,233 |
| Gallons | 54,978,577 | 43,870,962 | -11,107,616 |
| Miles Per Gallon | 24.30 | 38.08 | 13.78 |
| Diesel | | | |
| VMT[1] | 128,113,767 | 173,305,402 | 45,191,635 |
| Gallons | 13,731,841 | 13,018,036 | -713,805 |
| Miles Per Gallon | 9.33 | 13.31 | 3.98 |
| Compressed Natural Gas | | | |
| VMT[1] | 1,121,309 | 2,140,912 | 1,019,603 |
| Gallons | 305,062 | 622,531 | 317,469 |
| Miles Per Gallon | 3.68 | 3.44 | -0.24 |
| Electricity | | | |
| VMT[1] | 5,029,806 | 78,448,110 | 73,418,305 |
| kWh | 1,690,827 | 22,099,263 | 20,408,437 |
| Miles Per kWh | 2.97 | 3.55 | 0.58 |

Source: EMFAC2017 Version 1.0.2
Notes:
[1] Based on daily VMT provided by Fehr & Peers. Includes the full trip length for internal-internal trips and 50 percent trip length for external-internal/internal-external trips. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

The increases in VMT as shown in Tables 5.6-6 and 5.6-7 would be primarily attributable to the overall growth associated with the General Plan Update. Furthermore, it is anticipated that much of the planned growth would occur in the outlying areas of the City, as the City center is built out, and in the Temescal Canyon Planning Area. While VMT and fuel usage would generally increase from implementation of the General Plan Update, as shown in the tables above, the fuel efficiency of gasoline- and diesel-powered vehicles under year 2040 conditions would improve compared to baseline year 2018. The improvement would be attributable to regulatory compliance (e.g., CAFE standards) that trend toward producing cars that are more fuel efficient and the natural turnover of older, less-fuel-efficient vehicles for newer, more-fuel-efficient vehicles. The CAFE standards are not directly applicable to residents or land use development projects, but to car manufacturers. Thus, residents and employees of the City and SOI do not have direct control in determining the fuel efficiency of vehicles manufactured and that are made available. However, compliance with the CAFE standards by car manufacturers would ensure that vehicles produced in future years have greater fuel efficiency and would generally result in an overall benefit of reducing fuel usage by providing the population of the City and SOI more fuel-efficient vehicle options.

Although VMT associated with electric vehicles (EV) and thus electricity usage would increase under the with-project horizon year 2040 scenario when compared to existing baseline, it is also anticipated that EVs will improve in energy efficiency. In conjunction with the regulatory (i.e., RPS, SB 350, and SB 100) and general trend toward increasing the supply and production of energy from renewable sources, it is anticipated that a greater share of electricity used to power EVs will be from renewable sources in future years (e.g.,

individual photovoltaic systems, purchased electricity from a Community Choice Aggregation (CCA), and/or purchased electricity from SCE that is generated from renewable sources).

In addition to regulatory compliance that would contribute to more fuel-efficient vehicles and less demand in fuels, the General Plan Update includes policies that would contribute in minimizing overall VMT, and thus fuel usage associated with the City and SOI. These proposed policies focus on minimizing VMT through land use and transportation planning efforts that work in conjunction. The Land Use Element includes policies that focus on situating residential uses near commercial and office land uses in addition to transit centers and facilities (e.g., Policies LU-1.2, LU-8.2, LU-8.3, LU-8.4, LU-13.1, LU-13.2). Placing residential and nonresidential uses near each other to create self-sustaining communities and neighborhoods could result in shorter distances traveled between where people work and live and to amenities. The shorter distances would reduce VMT by reducing the average vehicle trip distance traveled. It would also encourage people to forego vehicle travel altogether and either bike, walk, or take public transportation, which would also contribute in minimizing VMT. Furthermore, proposed policies in the General Plan Update also include improving public transportation and active transit (e.g., biking and walking) infrastructure in the City and SOI (e.g., Policies ER-12.5 through ER-12.9, CE-4.1 through CE-4.10, and CE-5.1 through CE-5.10). Improving the public transportation and active transit infrastructure in conjunction with creating more self-sustaining neighborhoods and communities would encourage more non-single occupancy passenger vehicle travel, which would further contribute in minimizing VMT. Moreover, the General Plan Update includes proposed Policy ER-13.5, which focuses on increasing the use of clean fuel and electric vehicles by supporting the installation of electric vehicle infrastructure.

***Summary***

Overall, regulatory compliance (e.g., Building Energy Efficiency Standards, CALGreen, RPS, and CAFE standards) would increase building energy efficiency and vehicle fuel efficiency and reduce building energy demand and transportation-related fuel usage. Additionally, the General Plan Update includes policies related to land use and transportation planning and design, energy efficiency, public and active transit, and renewable energy generation that would contribute to minimizing building and transportation-related energy demands overall and demands on nonrenewable sources of energy. Implementation of proposed policies under the General Plan Update in conjunction with and complementary to regulatory requirements would ensure that energy demand associated with growth under the General Plan Update would not be inefficient, wasteful, or unnecessary. Therefore, energy impacts associated with implementation and operation of land uses accommodated under the General Plan Update would be less than significant.

## Climate Action Plan

The proposed CAP is a policy document that focuses on measures to reduce community-wide GHG emissions. Its implementation would not result in changes to the land use plan, and because there is no specific land use component associated with the CAP, its implementation would not directly result in energy demand. The update to the City's CAP focuses on GHG reduction measures to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan Update and would help reduce GHG emissions generated by existing and proposed land uses in the City and SOI. Transportation measures that reduce VMT (e.g., Measures 7.1 and 7.2) would result in reduction transportation-related fuel usage. Likewise,

energy efficiency improvements (e.g., Measures 1.2, 2.1, 4.1) would reduce the heating and cooling requirements for buildings. These energy efficiency measures, the measures increasing water efficiency (Measures 5.1 and 5.2), and the measures reducing energy demand (Measures 6.1 and 6.2) would contribute to minimizing energy demand. Furthermore, the proposed CAP supports increasing clean energy through installation of solar photovoltaic and energy storage systems on residential and nonresidential buildings (Measure 9.1) and developing and implementing a CCA program (Measure 9.2). Therefore, implementation of the proposed CAP would result in beneficial impacts to GHG.

**Impact 5.6-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. [Threshold E-2])**

### General Plan

#### *California Renewables Portfolio Standard Program*

The state's electricity grid is transitioning to renewable energy under California's RPS Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. As stated, the RPS goals have been updated since adoption of SB 1078 in 2002. In general, California has RPS requirements of 33 percent renewable energy by 2020 (SB X1-2), 40 percent by 2024 (SB 350), 50 by 2026 (SB 100), 60 percent by 2030 (SB 100), and 100 percent by 2045 (SB 100). SB 100 also establishes RPS requirements for publicly owned utilities that consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as SCE and Corona DWP, whose compliance RPS requirements would contribute to the State objective of transitioning to renewable energy. The land uses accommodated under the General Plan Update would comply with the current and future iterations of the Building Energy Efficiency Standards and CALGreen. Furthermore, as discussed in Impact 5.6-1, the General Plan Update includes Policies ER-13.4, IU-7.4, IU-7.6, and IU-7.7, which would support the statewide goal of transitioning the electricity grid to renewable sources. Therefore, implementation of the General Plan Update would not conflict or obstruct implementation of California's RPS Program, and no impact would occur.

### Climate Action Plan

The proposed CAP would not result in additional changes to and would not affect the development density or intensity allowed by the proposed land use plan of the General Plan Update. Also, as discussed under Impact 5.6-1, the proposed CAP includes Measures 9.1 and 9.2 that would support increasing the use and production of renewable energy. Therefore, the proposed CAP would complement the statewide goal of transitioning the electricity grid to renewable sources and would not interfere or obstruct with the implementation of the RPS Program. No impact would occur.

## 5.6.5 Existing Regulations and Standard Conditions

- Renewables Portfolio Standards (SB 1078)
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)

- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

## 5.6.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.6-1 and 5.6-2.

## 5.6.7 Mitigation Measures

No mitigation measures are necessary because there were no significant impacts identified under the applicable thresholds.

## 5.6.8 Level of Significance After Mitigation

Impacts would be less than significant.

## 5.6.9 References

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# 5. Environmental Analysis
## ENERGY

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# 5.7 GEOLOGY AND SOILS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the General Plan Update to impact geological, soil, and paleontological resources in the City of Corona and its sphere of influence (SOI). Paleontological resources are the fossilized remains of plants and animals. Cumulative impacts related to geology and soils would be contiguous with the City and SOI boundary. The analysis in this section is based in part on the following information:

- *City of Corona General Plan Update: Paleontological Resources Technical Report,* SWCA Environmental Consultants, February 2018
- *City of Corona General Plan Update Technical Background Report. 2019*

Complete copies of these studies are included as Appendix G and Appendix N of this Draft EIR, respectively.

## 5.7.1 Environmental Setting

### 5.7.1.1 REGULATORY FRAMEWORK

#### Federal Regulations

##### *Soil Hazards*

There are no federal regulations for soil or soil hazards.

##### *Paleontological Resources*

***Paleontological Resources Preservation, Omnibus Public Lands Act, Public Law 111-011, Title VI, Subtitle D (PRPA), 2009***

This legislation directs the Secretaries of the U.S. Department of the Interior and U.S. Department of Agriculture to manage and protect paleontological resources on federal land using "scientific principles and expertise." To formulate a consistent paleontological resources management framework, the PRPA incorporates most of the recommendations from the report of the Secretary of the Interior titled "Assessment of Fossil Management on Federal and Indian Lands" (USDI 2000). In passing the PRPA, Congress officially recognized the scientific importance of paleontological resources on some federal lands by declaring that fossils from these lands are federal property that must be preserved and protected. The PRPA codifies existing policies of the Bureau of Land Management, National Park Service, US Forest Service, Bureau of Reclamation, and US Fish and Wildlife Service, and provides the following:

- Uniform criminal and civil penalties for illegal sale and transport, and theft and vandalism of fossils from federal lands.
- Uniform minimum requirements for paleontological resource-use permit issuance (terms, conditions, and qualifications of applicants).

- Uniform definitions for "paleontological resources" and "casual collecting."
- Uniform requirements for curation of federal fossils in approved repositories.

### *National Environmental Policy Act of 1969*

The National Environmental Policy Act of 1969 (NEPA), as amended (Pub. L. 91-190, 42 USC 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258 Sec. 4(b), Sept. 13, 1982) recognizes the continuing responsibility of the federal government to "preserve important historic, cultural, and natural aspects of our national heritage…" (Sec. 101 [42 USC Sec. 4321]) (#382). With the passage of the PRPA, paleontological resources are considered a significant resource and it is therefore now standard practice to include paleontological resources in NEPA studies in all instances where there is a possible impact.

### *Antiquities Act of 1906*

The Antiquities Act of 1906 (16 USC 431-433) states, in part:

> That any person who shall appropriate, excavate, injure or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated, shall upon conviction, be fined in a sum of not more than five hundred dollars or be imprisoned for a period of not more than ninety days, or shall suffer both fine and imprisonment, in the discretion of the court.

Although there is no specific mention of natural or paleontological resources in the Act itself, or in the Act's uniform rules and regulations (Title 43 Part 3, Code of Federal Regulations [43 CFR 3]), the term "objects of antiquity" has been interpreted to include fossils by the National Park Service, Bureau of Land Management, the US Forest Service, and other federal agencies. Permits to collect fossils on lands administered by federal agencies are authorized under this Act. However, due to the large gray areas left open to interpretation due to the imprecision of the wording, agencies are hesitant to interpret this act as governing paleontological resources.

## State Laws

### *Soil Hazards*

### *California Alquist-Priolo Earthquake Fault Zoning Act*

The Alquist-Priolo Earthquake Fault Zoning Act was signed into state law in 1972. Its primary purpose is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The act delineates "Earthquake Fault Zones" along faults that are "sufficiently active" and "well defined." The act also requires that cities and counties withhold development permits for sites within an earthquake fault zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Pursuant to this act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault.

### *Seismic Hazard Mapping Act*

The Seismic Hazard Mapping Act (SHMA) was adopted by the state in 1990 to protect the public from the effects of nonsurface fault rupture earthquake hazards, including strong ground shaking, liquefaction, seismically induced landslides, or other ground failure caused by earthquakes. The goal of the act is to minimize loss of life and property by identifying and mitigating seismic hazards. The California Geological Survey prepares and provides local governments with seismic hazard zone maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures. SHMA requires responsible agencies to only approve projects within seismic hazard zones following a site-specific investigation to determine if the hazard is present, and if so, the inclusion of appropriate mitigation(s). In addition, the SHMA requires real estate sellers and agents at the time of sale to disclose whether a property is within one of the designated seismic hazard zones.

### *California Building Code*

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The publication date of the CBC is established by the California Building Standards Commission and the code is also known as Title 24, Part 2 of the California Code of Regulations. The most recent building standard adopted by the legislature and used throughout the state is the 2019 version of the CBC (effective January 1, 2020), often with local, more restrictive amendments that are based on local geographic, topographic, or climatic conditions. These codes provide minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground shaking with specified probability of occurring at a site.

### *Natural Hazards Disclosure Act*

The Natural Hazards Disclosure Act requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more state-mapped hazard areas, including a Seismic Hazard Zone. California law also requires that when houses built before 1960 are sold, the seller must give the buyer a completed earthquake hazards disclosure report and a booklet titled "The Homeowners Guide to Earthquake Safety." This publication was written and adopted by the California Seismic Safety Commission.

### *Soils Investigation Requirements*

Requirements for soils investigations for subdivisions requiring tentative and final maps, and for other specified types of structures, are in California Health and Safety Code Sections 17953–17955, and in Section 1802 of the California Building Code. Testing of samples from subsurface investigations is required, such as from borings or test pits. Studies must be done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

### *Paleontological Resources*

#### *California Public Resources Code*

Paleontological sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). In addition, paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA. PRC Division 5, Chapter 1.7, Section 5097.5, and Division 20, Chapter 3, Section 30244 states:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

This statute prohibits the removal, without permission, of any paleontological site or feature from lands under the jurisdiction of the state or any city, county, district, authority, or public corporation, or any agency thereof. As a result, local agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others. PRC Section 5097.5 also establishes the removal of paleontological resources as a misdemeanor, and requires reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, and district) lands.

## Local Laws

### *Soil Hazards*

The City of Corona has requirements in the Municipal Code, Title 15, Buildings and Construction, for the preparation and submittal of soil engineering reports and seismicity reports for all new development, and engineering geology reports for all new hillside development.

### *Paleontological Resources*

The City of Corona does not have regulations regarding paleontological resources.

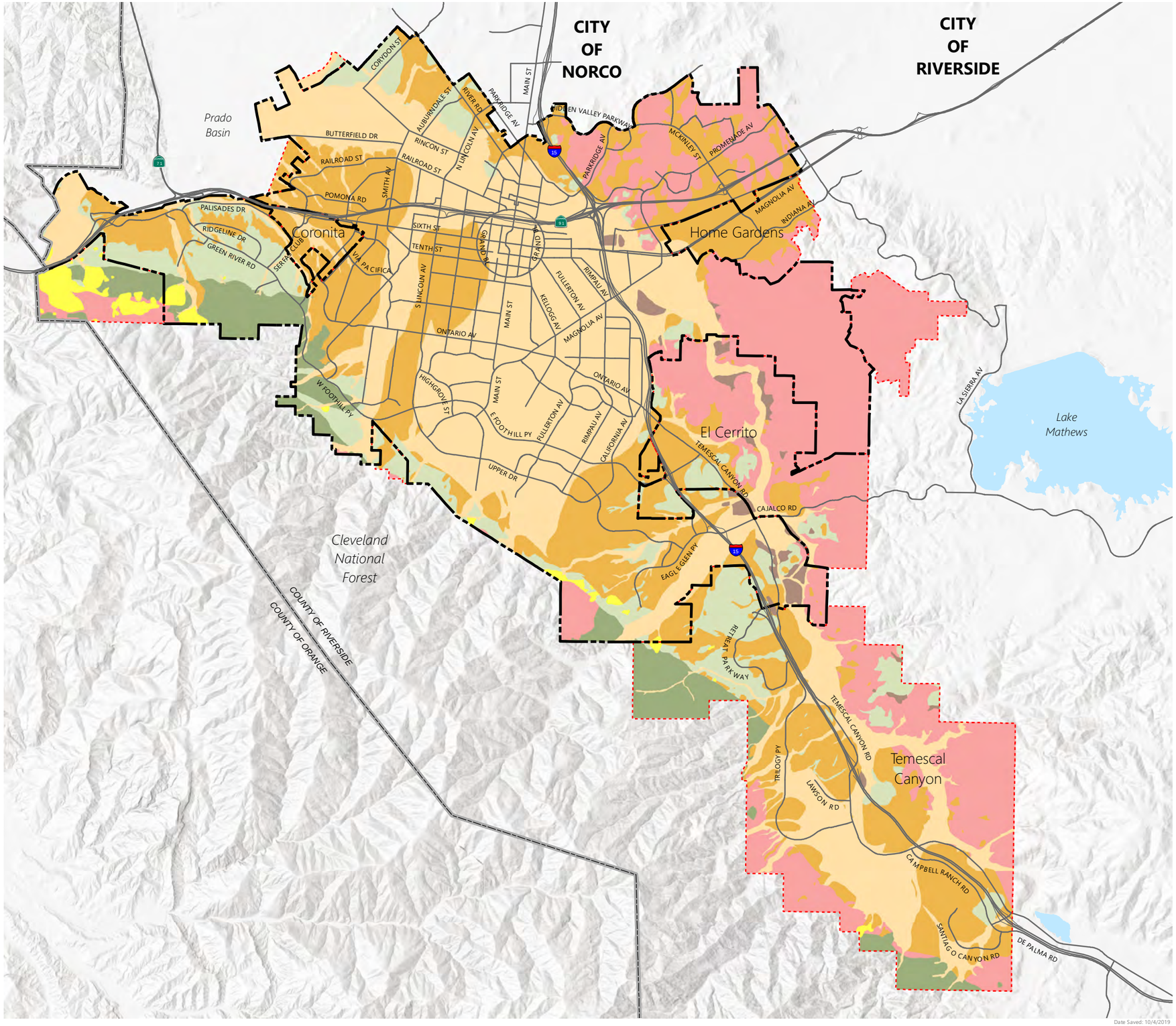
## 5.7.1.2 EXISTING CONDITIONS

## Geologic Setting

The City of Corona is situated in the Peninsular Ranges Geomorphic Province. This geomorphic province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin, south to the southern tip of Baja California (Norris and Webb 1990). The province varies in width from approximately 30 to 100 miles. In general, the province consists of a northwest-southeast oriented complex of blocks separated by similarly trending faults. The basement bedrock complex includes Jurassic age metavolcanic and metasedimentary rocks, and Cretaceous age igneous rocks of the Southern California batholith. Figure 5.7-1, *Geologic Map*, identifies the geology of the City and SOI.

Figure 5.7-1

# GEOLOGIC MAP




## Legend

- City Boundary
- Sphere of Influence Areas
- Engineered Fill
- Younger Sediments (Holocene to Late Pleistocene)
- Older Sediments (Pleistocene)
- Landslide Deposits (Holocene to Pleistocene)
- Younger Sedimentary Rocks (Cenozoic)
- Older Sedimentary Rocks (Mesozoic)
- Igneous and Metamorphic Rocks (Mesozoic)

*Source:*
*Morton, 2004. Preliminary Digital Geologic Map of the Santa Ana 30' X 60' Quadrangle, Southern California, Version 2.0.*

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PLACEWORKS

# 5. Environmental Analysis
## GEOLOGY AND SOILS

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The City extends along the northeastern front of the Santa Ana Mountains. The Santa Ana Mountains form a dominant feature of the northern Peninsular Ranges. The general cross section of the Santa Ana Mountains consists of an anticlinal fold across the Whittier-Elsinore fault zone (Schoellhamer et al. 1981). The crest of the fold parallels the mountain's ridgeline with a gently dipping southwestern flank and a steep, down-faulted northeastern limb. Additional intermediate folding has been superimposed on the major anticlinal feature. In general, younger Holocene and late Pleistocene alluvium is encountered beneath much of the City, with some Cretaceous igneous bedrock on the eastern side of the City, and some minor Tertiary sedimentary deposits along the southwestern edge of the City.

### *Faulting and Seismicity*

Major active fault zones are located within the City and surrounding areas. Based on review of the referenced geologic and seismic literature, there are mapped Alquist-Priolo Earthquake Fault Zones within the City limits associated with the Chino Fault and Glen Ivy segment of the Elsinore Fault.

Active and potentially active faults are located close to Corona (see Figure 5.7-2, *Regional Fault Location Map*). The Peninsular Ranges Province is traversed by a group of subparallel fault zones trending roughly northwest. Major fault systems include the active San Andreas, San Jacinto, Whittier-Elsinore, and Newport-Inglewood fault zones. These major fault systems form a regional tectonic framework consisting primarily of right-lateral, strike-slip movement. The City of Corona is situated between two major, active fault zones—the Whittier-Elsinore Fault Zone located to the southwest and the San Jacinto Fault located to the northeast. Other potentially active faults in close proximity to the City are the San Jose, Cucamonga, Sierra Madre, Newport-Inglewood, and San Andreas faults.

#### ***Whittier-Elsinore Fault***

The Whittier-Elsinore Fault Zone is the closest major fault system to the City and one of the largest in Southern California. The Elsinore Fault Zone extends from near the United States-Mexico border northwesterly to the northern Santa Ana Mountains. At the northern end, the zone of mapped faults branches into two segments west and east, the Whittier Fault and the Chino-Central Avenue Fault.

The northern portion of the Elsinore Fault Zone is also referred to as the Glen Ivy segment, and it is located on the extreme southwest portion of the City. The Glen Ivy segment is zoned under the Alquist-Priolo Earthquake Fault Zone Act. Dominant movement along the fault is right-lateral strike-slip. The Glen Ivy segment could produce a maximum moment magnitude 6.8 earthquake. From the northern end of the Glen Ivy segment the mapped zone of faulting is fragmented into a zone of discontinuous northwesterly trending faults along the eastern side of the Santa Ana Mountains in Corona. South of the City, the Temecula segment continues from Lake Elsinore for 27 miles. Subsurface investigations have shown that the Elsinore Fault is active and may have a recurrence interval of about 250 years for large earthquakes (Rockwell et. al. 1986). The fault branches into the Whittier and Chino-Central Avenue faults near the Santa Ana River.

The Chino-Central Avenue Fault crosses the western portion of Corona. The fault branches away from the Elsinore (Glen Ivy) Fault and extends northwest for a distance of approximately 13 miles through the Prado Basin and into the Puente Hills. Dominant movement along the fault is right-reverse oblique slip. The Chino

Fault could produce a maximum moment magnitude 6.9 earthquake. The Chino Fault is zoned under the Alquist-Priolo Earthquake Zone Act.

The Whittier Fault Zone extends approximately 24 miles from Whittier Narrows in Los Angeles County, southeasterly to Santa Ana Canyon where it merges with the Elsinore Fault Zone. The Whittier Fault Zone averages 1,000 to 2,000 feet in width and is made up of many subparallel and an echelon fault splays, which merge and branch along their course. The Whittier Fault Zone does not extend inside the City boundaries, but approaches to within a mile of the western edge of the City. Available information indicates that the Whittier Fault Zone is active and may be capable of generating an earthquake of magnitude 6.8 accompanied by surface rupture along one or more of its fault traces. The Whittier Fault is zoned under the Alquist-Priolo Earthquake Fault Zone Act northwest of the City.

### *San Jose Fault*

The San Jose Fault is approximately 12.4 miles long, extending southwest and west from near the mouth of San Antonio Canyon on the southern front of the San Gabriel Mountains about 17.8 miles north of the City. The fault is characterized by left-lateral reverse oblique-slip movement, and the primary dip direction is to the northwest at about 75 degrees. This fault zone was responsible for the 1990 M 5.4 Upland earthquake. The San Jose Fault could produce a maximum moment magnitude 6.9 earthquake.

### *Cucamonga Fault*

The Cucamonga Fault is the eastward extension of the Sierra Madre Fault Zone and is located about 20.4 miles north of the City. The Cucamonga Fault is about 17.4 miles long, extending west from Duncan Canyon to San Antonio Heights along the southern front of the San Gabriel Mountains. The Cucamonga Fault is capable of a maximum moment magnitude 7.0 earthquake. The fault is characterized by reverse dip-slip movement with a primary dip direction to the north at about 45 degrees. The Cucamonga Fault is considered active and is included within an Alquist-Priolo Earthquake Fault Zone.

### *San Jacinto Fault*

The San Bernardino and San Jacinto Valley (aka Claremont) segments of the San Jacinto Fault are regarded as the most active in southern California (Allen et al. 1965). The fault zone extends for over 130 miles and is characterized by right-lateral strike-slip movement. The San Jacinto Fault is capable of a maximum moment magnitude 6.9 earthquake. The fault is zoned under the Alquist-Priolo Earthquake Fault Zone Act.

### *Sierra Madre Fault Zone*

The main segment of the Sierra Madre Fault Zone is located about 21 miles northwest of the City. The Sierra Madre Fault Zone is approximately 35.4 miles long, extending west-northwest from Claremont and following the southern front of the San Gabriel Mountains to San Fernando. The Sierra Madre Fault Zone is characterized by reverse dip-slip movement and capable of a maximum moment magnitude 7.0 earthquake. The western portion of the fault is zoned under the Alquist-Priolo Earthquake Fault Zone Act.

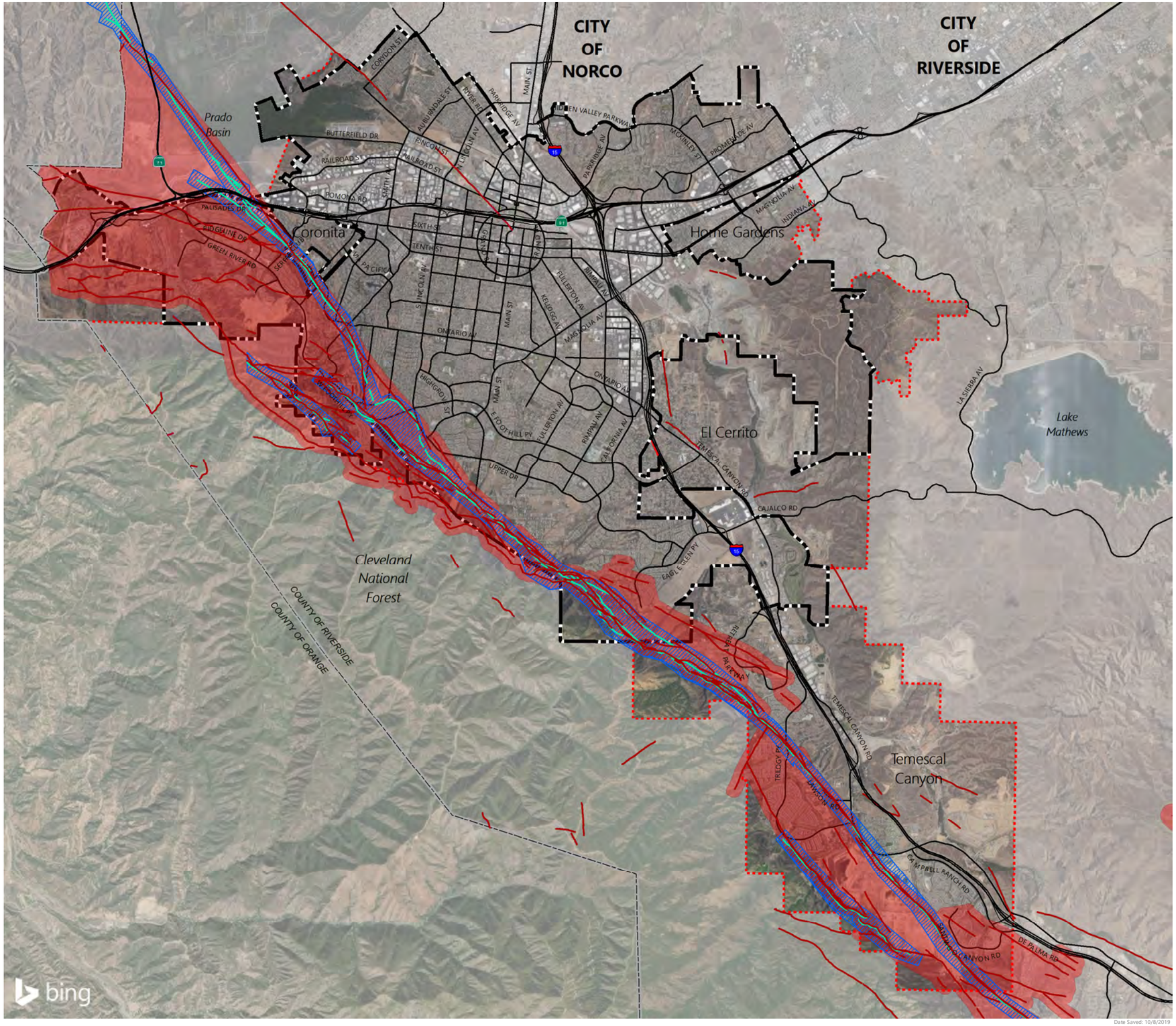


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Figure 5.7-2

# REGIONAL FAULT LOCATION MAP

## Legend

- Sphere of Influence Areas
- City Boundary

**Faults**

- Alquist-Priolo
- Riverside County
- Freeway Ramps
- Major Roads

**Alquist-Priolo Earthquake Fault Zone**

- Elsinore Fault Zone

**Riverside County Fault Zone**

- Elsinore Fault Zone

*Source: Riverside County 2013*

CORONA General Plan EIR

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PLACEWORKS

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### *Newport-Inglewood Fault Zone*

The Newport-Inglewood Fault Zone, source of the 1933 Long Beach earthquake (magnitude 6.4), consists of a series of disconnected, northwest-trending fault segments which extend from Los Angeles, through Long Beach and Torrance, to Newport Beach (Bilodeau et al. 2007; CDWR 1967). From Newport Beach, the fault zone continues offshore southeasterly past Oceanside. The most recent evidence for near surface movement during Holocene time is displacement of the Holocene Bolsa aquifer in the vicinity of Bolsa Chica Gap (CDWR 1967). Borehole evidence combined with groundwater pumping tests, piezometric levels, and geophysical data indicate that the North Branch and the Bolsa-Fairview traces of the Newport-Inglewood Fault Zone offset the base of the Bolsa aquifer by 20 feet and 10 feet (vertical separation), respectively. Although no onshore surface fault rupture has taken place in historic time (since 1769), the fault zone is considered capable of generating an earthquake of magnitude 7.1.

### *San Andreas Fault*

The San Bernardino and Southern segments of the San Andreas Fault are approximately 27.8 miles northeast of the City. The overall fault zone trends generally northwest for almost the entire length of California, from Cape Mendocino south to near the Mexican border. Past work estimated the recurrence interval for a M 8.0 earthquake along the entire fault zone is between 50 and 200 years, and a 140- to 200-year recurrence interval for major (M 7.0 to M 7.9) to great (M 8.0 or larger) earthquakes along the southern fault zone segment. The San Bernardino segment is estimated to be capable of a maximum moment magnitude 7.5 earthquake, although recent work estimates that larger earthquakes are possible if the rupture extends beyond local segments (Lin II 2017).

## *Strong Ground Motion*

Seismic activity along nearby or more distant fault zones is likely to cause ground shaking within the City limits. Distances from central Corona to active faults within 30 miles of the City are presented in Table 5.7-1.

Table 5.7-1 Principal Active Faults

| Fault | Distance from Fault to Central Corona (miles) | Maximum Moment Magnitude Earthquake. |
|---|---|---|
| Chino-Central Avenue | 1.9 | 6.9 |
| Elsinore – Glen Ivy | 3.4 | 6.8 |
| Elsinore – Whittier | 4.6 | 6.8 |
| San Jose | 17.8 | 6.9 |
| Cucamonga | 20.4 | 7.0 |
| San Jacinto – San Bernardino | 20.4 | 6.9 |
| Elsinore - Temecula | 20.8 | 6.8 |
| Sierra Madre (central) | 21.0 | 7.0 |
| San Jacinto – San Jacinto Valley | 22.0 | 6.9 |
| Newport-Inglewood(L.A. Basin) | 27.3 | 6.9 |
| Newport-Inglewood (offshore) | 27.4 | 7.1 |
| San Andreas – San Bernardino | 27.8 | 7.5 |
| San Andreas – Southern | 27.8 | 7.5 |

Source: Corona 2004.

## Geologic Hazards

### *Expansive Soils*

Expansive soils shrink or swell as the moisture content decreases or increases. Structures built on these soils may experience shifting, cracking, and breaking damage as soils shrink and subside or expand. Based on the presence of alluvial materials within the City, there is some potential for expansive soils (USDA 1971).

### *Corrosive Soils*

Corrosive soils contain chemical constituents that may cause damage to construction materials such as concrete and ferrous metals. One such constituent is water soluble sulfate, which, if in high enough concentrations, can react with and damage concrete. Electrical resistivity, chloride content, and pH level are all indicators of the soil's tendency to corrode ferrous metals.

### *Subsidence*

The phenomenon of widespread land sinking, or subsidence, is generally related to substantial overdraft of groundwater or petroleum reserves from underground reservoirs. The northwest portion of the City is partially within the Prado-Corona oil field, and drinking water production wells are also present within the project boundaries. Production in the Prado-Corona Oil Field has declined in recent years from over ten thousand barrels a year in the 1980s to none in the 2010s. Based on the relatively small size of the oil field and its limited production volumes, and the presence and use of groundwater spreading basins within the area, subsidence is not considered a significant potential hazard to the City.

## Seismic Hazards

### *Earthquake Faults, Including Information on Historic Earthquakes*

Historically, the City of Corona has generally not experienced a major destructive earthquake. However, based on a search of earthquake databases of the United States Geological Survey's (USGS) National Earthquake Information Center, several major earthquakes (magnitude 5.8 or more) have been recorded within approximately 60 miles of the City since 1769. The latest was the Northridge earthquake and Granada Hills aftershock in 1994, about 60 miles from the City. Table 5.7-2 summarizes the approximate magnitude and distance to these seismic events.

Table 5.7-2 Historical Earthquakes

| Date | Location | Maximum Magnitude (M)* | Approximate Epicentral Distance (miles) |
|---|---|---|---|
| 7/28/1769 | Los Angeles Basin | 6.0 | 31 |
| 12/8/1812 | Wrightwood | 7.0 | 33 |
| 7/11/1855 | Los Angeles Region | 6.0 | 55 |
| 12/16/1858 | San Bernardino Region | 6.0 | 22 |
| 7/30/1894 | Lytle Creek Region | 6.0 | 23 |
| 4/21/1918 | Lake Elsinore | 6.7 | 9 |
| 7/22/1923 | San Bernardino Region | 6.3 | 22 |
| 3/10/1933 | Long Beach | 6.4 | 29 |
| 2/9/1971 | San Fernando | 6.6 | 60 |
| 2/9/1971 | San Fernando | 5.8 | 60 |
| 2/9/1971 | San Fernando | 5.8 | 60 |
| 7/8/1986 | North Palm Springs | 6.0 | 54 |
| 10/1/1987 | Whittier Narrows | 5.9 | 30 |
| 6/28/1991 | Sierra Madre | 5.8 | 38 |
| 6/28/1992 | Big Bear | 6.3 | 49 |
| 1/17/1994 | Northridge | 6.7 | 60 |
| 1/17/1994 | Granada Hills | 5.9 | 60 |

Source: USGS 2017.
*Magnitudes listed are "summary magnitudes." Prior to 1898, these are adjusted intensity magnitudes and after 1898 are surface wave magnitudes

### *Surface (Fault) Rupture*

The potential for ground rupture due to fault movement is generally considered related to the seismic activity of known fault zones. Earthquake Fault Zones (formerly known as special study zones) have been established along known active faults in California in accordance with the Alquist-Priolo Earthquake Fault Zoning Act. Two active surface faults are mapped in the City and are zoned under the Alquist-Priolo Earthquake Fault Zone Act. Much of the western portion of the City is also within a Riverside County Fault Zone. Faults such as the Chino Fault and the Glen Ivy segment of the Elsinore Fault could cause ground rupture within the City.

### *Strong Seismic Ground Shaking*

Earthquakes are common to southern California, and geologic evidence is used to determine the likelihood of future ruptures along a fault. The amplitudes of earthquake waves are measured on the Richter Scale. Each one-point increase in magnitude represents a tenfold increase in wave amplitude and a 32-fold increase in energy. That is, a Magnitude (M) 7 earthquake produces 100 times (10 x 10) the ground motion amplitude of an M 5 earthquake, and releases over 1,000 times (32 x 32) more energy.

Peak horizontal ground acceleration (PHGA) values that could be expected at this location are based on types and characteristics of fault sources, distances and estimated maximum earthquake magnitude, and subsurface site geology. The accuracy of the PHGA estimate would depend upon the method of determination. The maximum magnitude earthquake ($M_{max}$) is considered to be the largest earthquake that is expected to occur along a fault under the current tectonic framework and is based in part on various fault characteristics (length, style of faulting, and historic seismicity). The Elsinore Fault is the dominant active fault that could be expected to significantly impact the City (USGS 2017).

Amplification or deamplification of the ground motion would likely occur as it passes from the bedrock and through the softer, deep alluvial deposits present at the site to the ground surface. The actual estimated PHGA at surface of the site would depend upon site amplification/deamplification effects, which depend substantially on the thickness of sedimentary deposits beneath the site, not presently known with certainty. Based on USGS amplification estimates for the Corona area based on a 1.0-second spectral acceleration (Field 2001), site effects from the geologic units underlying the City may be nearly three times the effect of crystalline bedrock at this same location.

The seismic design of buildings within the project boundaries is governed by the requirements of the most recent CBC. All site-specific seismic design parameters must be determined based on the subsurface soil conditions encountered during a geotechnical/engineering geologic investigation.

### *Slope Failure*

Landslides are perceptible downward movements of a mass of earth (soil and/or debris), rock, or a combination of the two under the influence of gravity. Landslide materials are commonly porous and very weathered in the upper portions and along the margins of the slide. They may also have open fractures or joints. Slope failures can occur during or after periods of intense rainfall or in response to strong seismic shaking. Areas of high topographic relief, such as steep canyon walls, are most likely to be impacted by slope failure. Figure 5.7-3*, Deep-Seated Landslide Hazards*, identifies potential landslide hazards in the City and SOI associated with deep-seated, bedrock-related failures. Figure 5.7-4, *Debris Flow Hazards*, shows potential debris/mudslide hazards in the City and SOI associated with shallow, soil-based failures.

### *Liquefaction and Related Ground Failure*

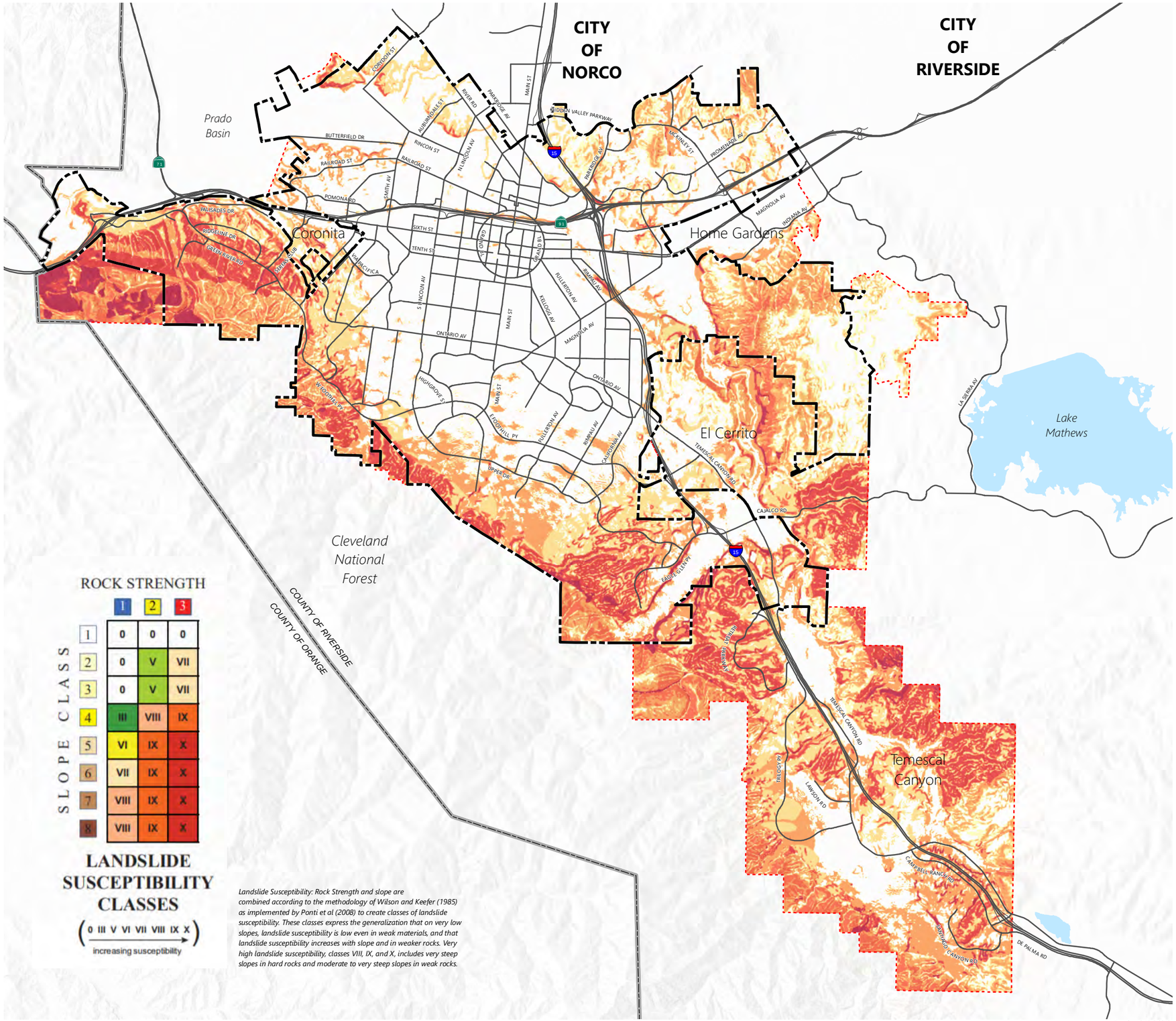
Liquefaction is a process whereby strong ground shaking causes sediment layers that are saturated with groundwater to lose strength and behave as a fluid. This subsurface process can lead to near-surface or surface ground failure that can result in property damage and structural failure. If surface ground failure does occur, it is usually expressed as lateral spreading, flow failures, ground oscillation, and/or general loss of bearing strength. Sand boils (injections of fluidized sediment) can commonly accompany these different types of failure. In order to determine a region's susceptibility to liquefaction, the following three major factors must be analyzed:

Figure 5.7-3

# DEEP-SEATED LANDSLIDE HAZARDS

Legend

- City Boundary
- Sphere of Influence Areas




ROCK STRENGTH

| SLOPE CLASS | 1 | 2 | 3 |
|---|---|---|---|
| 1 | 0 | 0 | 0 |
| 2 | 0 | V | VII |
| 3 | 0 | V | VII |
| 4 | III | VIII | IX |
| 5 | VI | IX | X |
| 6 | VII | IX | X |
| 7 | VIII | IX | X |
| 8 | VIII | IX | X |

**LANDSLIDE SUSCEPTIBILITY CLASSES**

( 0 III V VI VII VIII IX X → )

increasing susceptibility

*Landslide Susceptibility: Rock Strength and slope are combined according to the methodology of Wilson and Keefer (1985) as implemented by Ponti et al (2008) to create classes of landslide susceptibility. These classes express the generalization that on very low slopes, landslide susceptibility is low even in weak materials, and that landslide susceptibility increases with slope and in weaker rocks. Very high landslide susceptibility, classes VIII, IX, and X, includes very steep slopes in hard rocks and moderate to very steep slopes in weak rocks.*

*Source:*
*Deep-Seated Landslide Susceptibility (CGS Map Sheet 58)*
*C.J. Wills, F.G. Perez, C. I. Gutierrez-California Geological Survey, 2011*

*For more information please see:*
*http://www.conservation.ca.gov/cgs/information/publications/ms/documents/ms58.pdf*

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Miles
0 0.5 1 1.5 2

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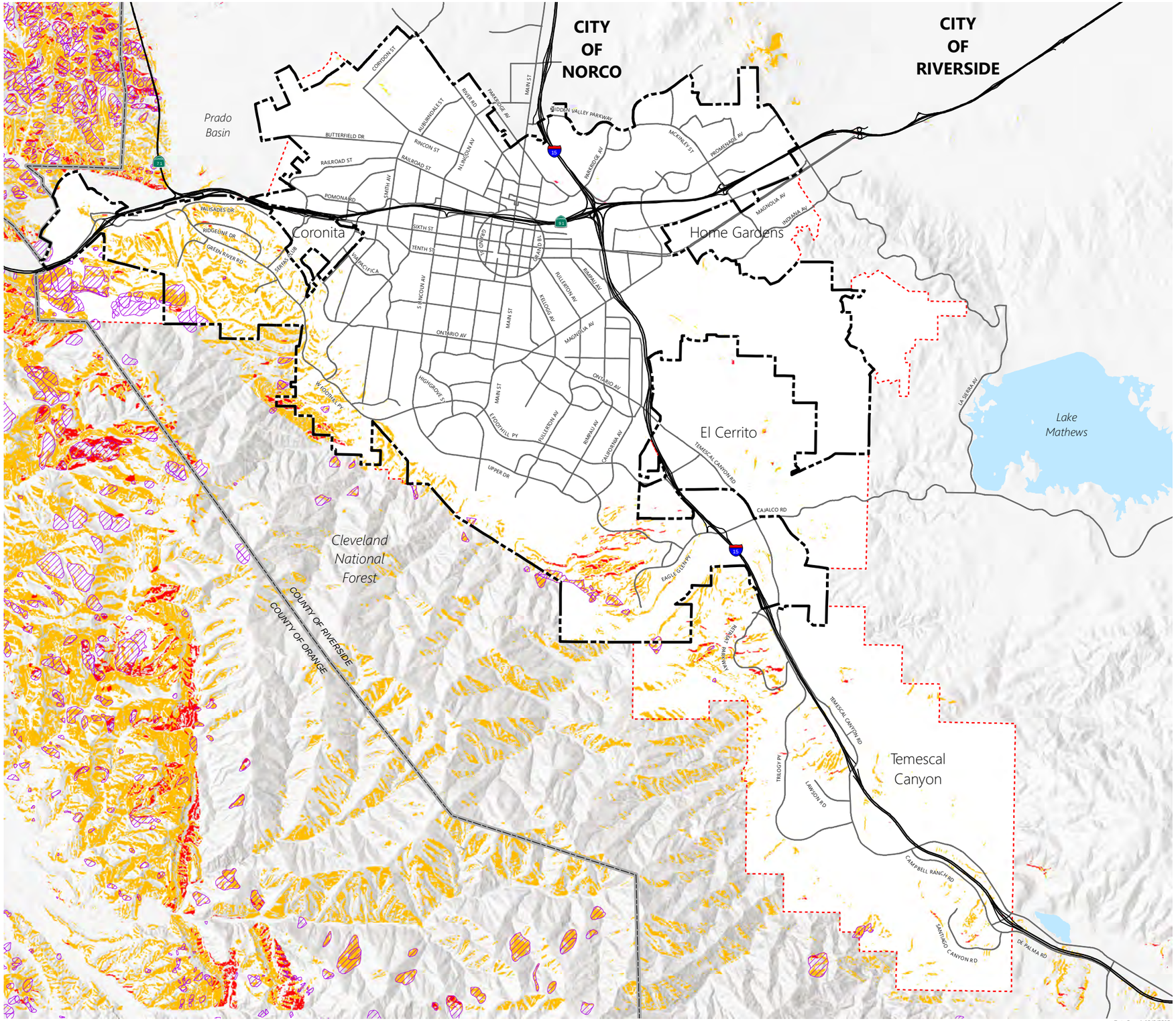
Figure 5.7-4

# DEBRIS FLOW HAZARDS




Legend

- City Boundary
- Sphere of Influence Areas
- Landslide Deposits

**Soil Slip Susceptibility**

- Moderate Susceptibility
- High Susceptibility

*Source:*
*Morton, 2004. Preliminary Digital Geologic Map of the Santa Ana 30' X 60' Quadrangle, Southern California, Version 2.0.; Morton, et al., 2003. Preliminary Soil-Slip Susceptibility Maps, Southwestern California*

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Miles
0 0.5 1 1.5 2

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- The intensity and duration of ground shaking.

- The age and textural characteristic of the alluvial sediments. Generally, the younger, less-well-compacted sediments tend to have a higher susceptibility to liquefaction. Textural characteristics also play a dominant role in determining liquefaction susceptibility. Sand and silty sands deposited in river channels and floodplains tend to be more susceptible to liquefaction, and floodplains tend to be more susceptible to liquefaction than coarser or finer grained alluvial materials.

- The depth to the groundwater. Groundwater saturation of sediments is required in order for earthquake-induced liquefaction to occur. In general, groundwater depths shallower than 10 feet to the surface can cause the highest liquefaction susceptibility.

Research and historical data indicate that loose, granular materials at depths of less than 50 feet, with silt and clay contents of less than 30 percent, and saturated by relatively shallow groundwater table are most susceptible to liquefaction. These geological conditions are typical in parts of southern California, including the City of Corona, and in valley regions and alluvial floodplains. Based on a review of the Riverside County "Map My County" website, there is a potential for liquefaction within the City. The areas with the highest potential for liquefaction are generally on the north side of the City in alluvial areas both along and to the north and east of Temescal Wash (Riverside County 2017), as shown in Figure 5.7-5, *Liquefaction Hazards*.

### *Hazardous Buildings*

The principal threat in an earthquake is not ground shaking, fault rupture, or liquefaction, but the damage that the earthquake causes to buildings that house people or an essential function. Continuing advances in engineering design and building code standards over the past decade have greatly reduced the potential for collapse in an earthquake of most new buildings. However, many buildings were built in past decades, before some of the earthquake design standards were incorporated into the building code. Several specific building types are a particular concern in this regard.

- **Unreinforced Masonry Buildings.** In the late 1800s and early 1900s, unreinforced masonry was the most common type of construction for larger downtown commercial structures and for multistory apartment and hotel buildings. These were recognized as a collapse hazard following the San Francisco earthquake of 1906, the Santa Barbara earthquake of 1925, and again in the aftermath of the Long Beach earthquake of 1933. These buildings are still the most hazardous buildings in an earthquake. Per Senate Bill 547, local jurisdictions are required to enact structural hazard reduction programs by (a) inventorying pre-1943 unreinforced masonry buildings, and (b) developing mitigation programs to correct the structural hazards.

- **Precast Concrete Tilt-up Buildings.** This building type was introduced following World War II and gained popularity in light industrial buildings during the late 1950s and 1960s. Extensive damage to concrete tilt-up buildings in the 1971 San Fernando earthquake revealed the need for better anchoring of

walls to the roof, floor, and foundation elements of the building and for stronger roof diaphragms.[1] In the typical damage to these buildings, the concrete wall panels would fall outward and the roof would collapse.

- **Soft-Story Buildings.** Soft-story buildings are those in which at least one story, commonly the ground floor, has significantly less rigidity and/or strength than the rest of the structure. This can form a weak link in the structure unless special design features are incorporated to give the building adequate structural integrity. Typical examples of soft-story construction are buildings with glass curtain walls on the first floor only, or buildings placed on stilts or columns, leaving the first story open for landscaping, street-friendly building entry, parking, or other purposes. In the early 1950s to early 1970s, soft-story buildings were a popular construction style for low- and midrise concrete frame structures.

- **Nonductile Concrete Frame Buildings.** The brittle behavior of nonductile concrete frame buildings can create major damage and even collapse under strong ground shaking. This type of construction, which generally lacks masonry shear walls, was common in the very early days on reinforced concrete buildings, and they continued to be built until the codes were changed to require ductility in the moment-resisting frame in 1973. There were large numbers of these buildings built for commercial and light industrial use in California's older, densely populated cities. Although many of these buildings have four to eight stories, there are many in the lower height range. This category also includes one-story parking garages with heavy concrete roof systems supported by nonductile concrete columns.

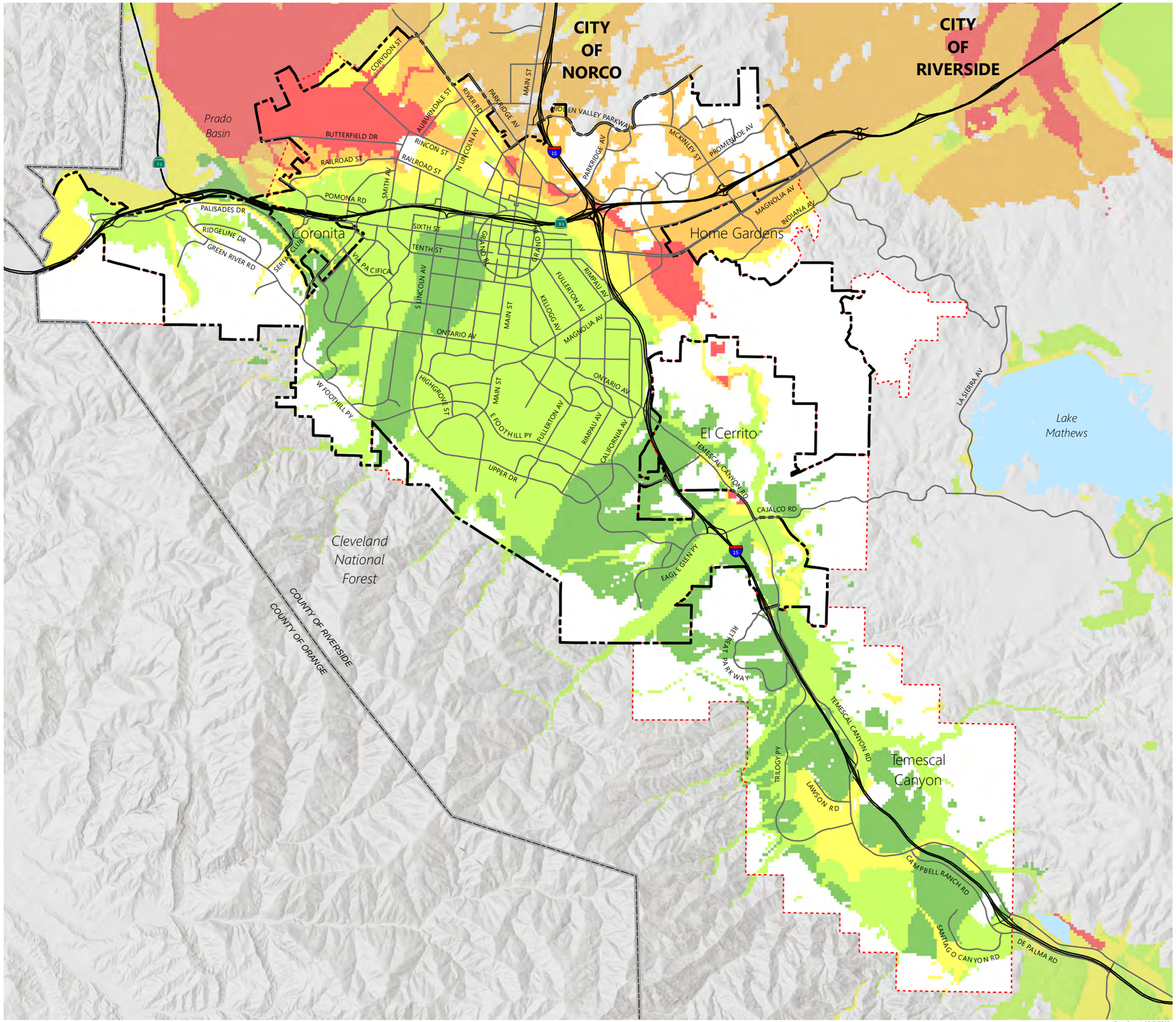
## Paleontological Resources

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. These are valued for the information they yield about the history of the earth and its past ecological settings. There are two types of resources: vertebrate and invertebrate. These resources are found in geologic strata conducive to their preservation, typically sedimentary formations. Paleontological sites are areas that show evidence of prehuman activity. Often they are simply small outcroppings visible on the surface or sites encountered during grading. While the sites are important indications, it is the geologic formations that are the most important, since they may contain important fossils. Potentially sensitive areas for the presence of paleontological resources are based on the underlying geologic formation.

[1] A roof diaphragm is a structural roof deck that is capable of resisting shear that is produced by lateral forces, such as wind or seismic loads.

Figure 5.7-5

# LIQUEFACTION HAZARDS




## Legend

- City Boundary
- Sphere of Influence Areas

**Susceptibility**

- Very High
- High
- Moderate
- Low
- Very low

*Source:*
*County of Riverside, 2017*

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0 0.5 1 1.5 2 Miles

PLACEWORKS

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### *City of Corona*

A records search of fossil locations in the City of Corona was conducted at the Natural History Museum of Los Angeles County (NHMLA) and the University of California Museum of Paleontology (UCMP), as shown in Table 5.7-3, *Fossil Localities Within and Near the City of Corona.*

Table 5.7-3 Fossil Localities from Within and Proximate to the City of Corona

| Geologic Unit | Locality No. | Taxa | Location |
|---|---|---|---|
| NHMLA Fossil Locations within the City of Corona | | | |
| Pleistocene Alluvium (Qof, Qoa, Qov, Qvof, Qvoa) | LACM 1207 | Deer | Highway 91, north of downtown Corona on the west side of Cota Street |
| Fernando Formation (Tf) | LACM 6962, 6963, 7319, 7321-7323, 7325, 7479-7481, 7486-7488 | Multiple marine and terrestrial organisms, including ray and sharks (eagle ray, guitarfish, whitetip shark, hammerhead, leopard shark), bony fish (herring, carp, killifish, stickleback), amphibians and reptiles (alligator lizard, snake, pond turtle, tortoise, frog), and mammals (rodent, dugong, mastodon, whale, antelope, camel) | West of Corona Freeway and north of Bedford Wash |
| Puente Formation (Tp) | LACM 7320, 7482-7485 | Multiple fish (silverside, herring, mora, mackerel, croaker, and salmon) | West of Corona Freeway and north of Bedford Wash |
| NHMLA Fossil Locations within the Vicinity of Corona | | | |
| Pleistocene Alluvium (Qof, Qoa, Qov, Qvof, Qvoa) | LACM 7811, 7268, 7271, 7508 | Whipsnakes, horses, ground sloths | Summer Avenue in Mira Loma, north of Corona (7811), Chino Hills, northwest of Corona (7268, 7271), Soquel Canyon, west of Corona (7508) |
| Topanga Formation | LACM 6292, 3891, 4008-4009 | Sharks, the marine mammal *Desmostylus*, dugongs, and whales | Santiago Canyon Road, southwest of Corona (6292), El Modena foothills (3891, 4008-4009) |
| Sespe Formation (Tsv) | LACM 4553-4554 | Turtles, opossums, rabbits, mice, and badgers | Upper Oso Reservoir, southwest of Corona |
| Vaqueros Formation (Tvs) | LACM 1905, 4315, 6624 | Multiple sharks and the marine mammal *Desmostylus* | Limestone Canyon (1905), west of Corona on Highway 91 (4315), southwest of Corona (6624) |
| Santiago Formation | LACM 3881, 3883-3884, 3979, 5022, 5346-5347, 6926, 68102 | Turtles, crocodiles, birds, rodents, insectivores, brontothere, camels, and rhinoceroses | Northwestern San Diego County, south of Corona |
| Silverado Formation (Tsi) | LACM 4634 | Turtles | Irvine Ranch, west of city limits in Santa Ana Mountains |
| Ladd Formation (Kl) | LACM 1895, 4221 | Multiple sharks | Silverado Canyon |
| UCMP Fossil Locations within Riverside | | | |
| Pleistocene Alluvium (Qof, Qoa, Qov, Qvof, Qvoa) | RV8601, V65248, V7006 | Multiple rodents, mammoths, snakes | Corona East (RV8601), Riverside (V65248), Carr Ranch (V7006) |
| Lake Matthews Formation (Tlm) | RV7201 | Multiple mammals | Lake Matthews |
| Ladd Formation (Kl) | A810 | Multiple gastropods | Santa Ana Mountains |

Source: SWCA 2018.

As noted in the table, there are multiple known fossil localities in the City, and other fossil localities are known from similar geologic formations in the vicinity. Although the information on localities provided by the UCMP search is only available by county, the search reveals that the UCMP has recorded localities from geologic formations found in the City and throughout Riverside County. The data provided by NHMLA indicates that there are no known fossil localities in the SOI; however, the numerous fossil localities reported from the City and the surrounding area by both the NHMLA and the UCMP are relevant to the paleontological sensitivity of the SOI, as all of the geologic units that have yielded fossil resources shown in those data are also present in the SOI.

## 5.7.2 Thresholds of Significance

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

G-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42.)

ii) Strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction.

iv) Landslides.

G-2 Result in substantial soil erosion or the loss of topsoil.

G-3 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.

G-4 Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

G-5 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.

G-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

## 5.7.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential geology, soils, and paleontological impacts as a result of implementation of the proposed project.

### 5.7.3.1 GEOLOGY AND SOILS

#### Public Safety Element

*Seismic and Geologic Hazards*

- **PS-1.1** Maintain accurate records, information, and mapping of seismic and geologic activity and hazards in Corona and the region from the California Geologic Survey; update records with information from local geotechnical studies.

- **PS-1.2** In areas subject to seismic and geologic hazards, require development proposals to include a geotechnical hazard analysis and specific mitigations to reduce risks to acceptable levels as a condition of approval.

- **PS-1.3** Enforce development requirements, such as seismic study analyses, project siting, setbacks, and project design features for proposed developments near the Elsinore Fault Zone and other active faults in accordance with the Alquist-Priolo Act.

- **PS-1.4** Require adherence to the latest California Building Codes and associated regulations in the City's Municipal Code; update local codes and development requirements periodically for the latest best practices.

- **PS-1.5** Locate new or existing buildings in the Elsinore earthquake fault zone or in other areas at risk from liquefaction, landslides, or other seismic and geologic hazards in the community and take corrective actions to minimize the risk of loss.

- **PS-1.6** Identify vulnerable structures and encourage the retrofit or upgrade of vulnerable buildings (e.g., mobile homes) to minimize the damage to structures and reduce the risk or injury or death from seismic or geologic events.

- **PS-1.7** Require geotechnical analysis for projects proposed in areas subject to corrosive soils. Where found, require appropriate cathodic protections and other best practices to minimize damage to buildings, structures, and infrastructure.

- **PS-1.8** Limit grading for developments to the minimum needed to preserve natural topography, preserve vegetation, and maintain soil and slope stability. Require appropriate grading plans and slope stability to minimize soil instability..

### 5.7.3.2 PALEONTOLOGICAL RESOURCES

#### Environmental Resources Element

*Paleontological Resources*

- **HR-3.2** Require that development proposals incorporate specific measures to identify, protect, and preserve cultural resources in the planning, environmental review, and development process.

- **HR-3.4** Any project that involves earth-disturbing activities in an area determined to be archaeologically or culturally sensitive shall require evaluation of the site by a qualified archaeologist. The applicant shall implement the recommendations of the archaeologist, subject to the approval of the City. Planning Department.

- **HR-3.6** Any project that involves earth-disturbing activities in soil or rock units known or reasonably suspected to be fossil-bearing shall require monitoring by a qualified paleontologist retained by the project applicant for the duration of excavation or trenching.

- **HR-3.7** Paleontological resources found prior to or during construction shall be evaluated by a qualified paleontologist, and appropriate mitigation measures applied, pursuant to § 21083.2 of CEQA, before the resumption of development activities. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the Riverside County Museum of Natural History.

### Infrastructure and Utilities Element

#### *Sewer/Reclaimed Water*

- **IU-3.3** Build, upgrade, maintain, and expand existing sewer collection and treatment facilities where existing systems are deficient in accordance with the Sewer Master Plan and state and federal standards.

- **IU-3.4** Require that new development be connected to the municipal sewer system and ensure that adequate capacity is available for the treatment of generated sewer flows and safe disposal of sludge.

- **IU-3.6** Restrict and prioritize sewer connections, if necessary, to comply with available treatment capacity.

- **IU-3.7** Ensure that sewer connection fees and charges are reviewed annually and are sufficient to fully fund and support the construction, improvement, and rehabilitation of sewer facilities.

- **IU-3.8** Require that new development be connected to the City's sewer system.

## 5.7.4 Environmental Impacts

The following impact analysis addresses thresholds of significance. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.7-1: The General Plan Update would not subject people and structures in Corona to seismic-related hazards. [Thresholds G-1 and G-3]

## General Plan

### *Seismic Hazards*

Corona's location and underlying geology make it susceptible to seismic and geologic hazards, including surface (fault) rupture and seismic ground shaking.

- **Surface (Fault) Rupture.** Seismic activity has been known to cause surface rupture, or ground displacement, along a fault or within the general vicinity of a fault zone. Surface rupturing could damage or destroy infrastructure, pipelines, roads, and bridges. Much of the western portion of the city extending southeast through the SOI is within a fault zone. Two active surface faults—the Chino Fault and Glen Ivy segment of the Elsinore Fault—could produce earthquakes of 7M, causing surface ground ruptures. Areas with known surface rupture hazards are identified as Alquist Priolo Special Study Zones. Primary ground rupture can also be expected to spread into secondary areas. Mandatory compliance with existing regulations, including the preparation and submittal of seismicity reports with all grading plans, would ensure surface rupture impacts to any new developments within the City would be reduced to a less than significant level.

- **Seismic Ground Shaking.** Ground shaking is responsible for the majority of damage from earthquakes and can damage or destroy buildings, structures, pipelines, and infrastructure. The intensity of shaking depends on the type of fault, distance to the epicenter, magnitude of the earthquake, and subsurface geology. The Whittier-Elsinore fault is potentially capable of producing the most intense ground accelerations in the City because it is closest. The greatest severity of ground shaking would occur in central Corona, Temescal Valley, and northern Corona. In southern California, there is no way to avoid earthquake hazards. However, compliance with the CBC, including specific provisions for seismic design, would mitigate and minimize the effects of earthquakes. The CBC has been accepted as the basic design standard in the City of Corona and Riverside County. The design of structures in accordance with the CBC is expected to minimize the effects of ground shaking to the greatest degree feasible and to less than significant levels except for a catastrophic seismic event.

### *Secondary Effects*

Secondary effects of earthquakes are nontectonic processes such as ground deformation, including fissures, settlement, displacement, and loss of bearing strength, and are the leading causes of damage to structures during a moderate to large earthquake. Secondary effects leading to ground deformation include liquefaction, lateral spreading, seismically induced landslides, and ground lurching.

#### *Liquefaction*

Research and historical data indicate that loose, granular materials at depths of less than 50 feet with silt and clay contents of less than 30 percent saturated by relatively shallow groundwater table are most susceptible to liquefaction. These geological conditions are typical in parts of southern California, including the City of

Corona, and in valley regions and alluvial floodplains. Much of the northern portion of the City is susceptible to liquefaction.

Although liquefaction is expected within the City, based on the mandatory compliance with existing regulations, including the preparation and submittal of soil engineering reports, liquefaction impacts to any new developments within the area would be reduced to a less than significant level.

### *Landslides*

Marginally stable slopes (including existing landslides) may be subject to landslides caused by earthquakes. The landslide hazard depends on many factors, including existing slope stability, shaking potential, and presence of existing landslides. The terrain of the City is varied, ranging from relatively flat to hilly. Any grading permit for a hillside development must have an engineering geology report prepared and submitted to the City. Therefore, landslides impacts are not expected to any new developments in the City.

### *Lateral Spreading*

Lateral spreading is a phenomenon where large blocks of intact, nonliquefied soil move downslope on a large liquefied substratum. The mass moves toward an unconfined area, such as a descending slope or stream-cut bluff, and has been known to move on slope gradients as little as one degree. Site-specific mass grading and compaction that would occur as part of future development in the City would mitigate any potential impacts from seismically induced lateral spreading.

### *Settlement, Subsidence, and/or Collapse*

The potential hazard posed by seismic settlement and/or collapse within the City is considered moderate based on the compressibility of the underlying alluvial soils and the presence of shallow groundwater. Strong ground shaking can cause settlement of alluvial soils underlying a site by allowing sediment particles to become more tightly packed. Alluvial deposits are especially susceptible to this phenomenon. Artificial fills, if not adequately compacted, may also experience seismically induced settlement. Because unconsolidated soils and undocumented fill material are present within the City, seismically induced settlement and/or collapse are potential impacts.

Subsidence of basins attributed to overdraft of groundwater aquifers or overpumping of petroleum reserves has been reported in various parts of southern California. Although groundwater withdrawal in the City has led to lowered groundwater levels, it has not been excessive (see Section, 5.10, *Hydrology and Water Quality*). A portion of the Prado-Corona oil field is located within the City. Based on the relatively small size of the oil field, its cessation of production, and the presence and use of groundwater spreading basins within the area, subsidence due to overpumping of groundwater or petroleum reserves is not considered a potentially significant impact for the City, and no mitigation is required.

Site-specific mass grading and compaction that would occur as part of future development within the City would serve to mitigate any potential impacts to seismically induced settlement and/or collapse in the City.

### *Ground Lurching*

Seismically induced ground lurching occurs when soil or rock masses move at right angles to a cliff or steep slope in response to seismic waves. Structures built on these masses can experience significant lateral and vertical deformations if ground lurching occurs. Although ground lurching is expected within the City, based on the mandatory compliance with existing regulations, including the preparation and submittal of soil engineering, engineering geology and seismicity reports, ground lurching impacts to any new developments within the area would be reduced to a less than significant level.

### *Summary*

During operation of a project, the City's Municipal Code (Chapter 15.36, Grading Regulations) requires that projects submit grading plans and a geotechnical evaluation to minimize differential settlement and the slipping or sliding of earth, minimizing impacts from unstable geologic or soil conditions. The City also requires a soils engineering report that includes an evaluation of the nature, distribution, and physical and chemical properties of existing soils, such as the presence of expansive or corrosive soil conditions. Recommendations in the geotechnical report(s) (e.g., soils engineering, engineering geology, and seismicity reports) are required to be included on grading plans and implemented during project construction activities. Mandatory compliance with existing regulations, including the preparation and submittal of soil engineering, geotechnical evaluation, and seismicity reports for new developments, would reduce impacts to a less than significant level. Additionally, the General Plan Update includes the following policies to ensure that risks to residents and businesses are minimized.

- **PS-1.2** In areas subject to seismic and geologic hazards, require development proposals to include a geotechnical hazard analysis and specific mitigations to reduce risks to acceptable levels as a condition of approval.

- **PS-1.3** Enforce development requirements, such as seismic study analyses, project siting, setbacks, and project design features for proposed developments near the Elsinore Fault Zone and other active faults in accordance with the Alquist-Priolo Act.

- **PS-1.4** Require adherence to the latest California Building Codes and associated regulations in the City's Municipal Code; update local codes and development requirements periodically for the latest best practices.

- **PS-1.5** Locate new or existing buildings in the Elsinore earthquake fault zone or in other areas at risk from liquefaction, landslides, or other seismic and geologic hazards in the community and take corrective actions to minimize the risk of loss.

- **PS-1.6** Identify vulnerable structures and encourage the retrofit or upgrade of vulnerable buildings (e.g., mobile homes) to minimize the damage to structures and reduce the risk or injury or death from seismic or geologic events.

### Climate Action Plan

The update to the City's Climate Action Plan (CAP) focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect seismic hazards in the City or SOI. Consequently, implementation of the City's CAP would result in less than significant impacts to seismic hazards.

**Impact 5.7-2: Unstable geologic unit or soils conditions, including soil erosion, would not result due to implementation of the General Plan Update. [Thresholds G-2 and G-3]**

A comprehensive discussion of erosion and water quality from rain events can be found in Section 5.7, *Hydrology and Water Quality*.

### General Plan

Soils in the City are particularly prone to erosion during the grading phase of development, especially during heavy rains. Reduction of the erosion potential during construction activities can be accomplished through a Storm Water Pollution Prevention Plan (SWPPP), which specifies best management practices for temporary erosion controls. Standard erosion control measures would be implemented as part of the SWPPP for any proposed project to minimize the risk of erosion or sedimentation during construction. The SWPPP must include an erosion control plan that prescribes measures such as phasing grading, limiting areas of disturbance, designating restricted-entry zones, diverting runoff from disturbed areas, protective measures for sensitive areas, outlet protection, and provisions for revegetation or mulching. The erosion control plan (required under Section 15.36.060, Erosion Control Plan, of the City's Municipal Code) would also include treatment measures to trap sediment, including inlet protection, straw bale barriers, straw mulching, straw wattles, silt fencing, check dams, terracing, and siltation or sediment ponds.

During operation of a project, the City's Municipal Code (Chapter 15.36, Grading Regulations) requires that projects submit a grading plans and a geotechnical evaluation to minimize differential settlement and the slipping or sliding of earth; therefore, minimizing impacts from unstable geologic or soil conditions. The City also requires a soils engineering report that includes an evaluation of the nature, distribution and physical and chemical properties of existing soils, such as the presence of expansive or corrosive soil conditions. Recommendations in the geotechnical report(s) (i.e., soils engineering, engineering geology, and seismicity reports) are required to be included on grading plans and implemented during project construction activities.

Mandatory compliance with existing regulations, including the preparation and submittal of SWPPP, soil engineering, and geotechnical evaluation for new developments, would reduce impacts to a less than significant level.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions

generated by existing and proposed land uses in the City. The CAP would not affect geology and soil hazards in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to soil erosion.

**Impact 5.7-3: Soil conditions would not result in risks to life or property. [G-3 and G-4]**

## General Plan

Highly expansive soils swell when they absorb water and shrink as they dry and can cause structural damage to building foundations and roads. Thus, they are less suitable for development than nonexpansive soils. The City and SOI is known to have a low to moderate potential for expansive soils. The presence of expansive soils in areas proposed for construction would be considered a potentially significant impact. Construction techniques that address expansive soils include deepened foundations, post-tension foundations, and moisture conditioning. Corona implements a number of existing codes and policies that serve to mitigate the impacts of development within areas containing expansive soils. As described above, regulations relating to geology and soils are identified in the Corona Municipal Code, Chapter 15.36, Grading Regulations, which requires that projects submit a soil engineering report. Recommendations in the geotechnical report(s) (i.e., soils engineering, engineering geology, and seismicity reports) are required to be included on grading plans and implemented during project construction activities. Therefore, application of the existing regulations identified in the municipal code, CBC, and grading regulations would minimize the risk associated with any development proposed within areas containing expansive soils to less than significant levels.

## Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect geology and soils hazards and development in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to soil hazards.

**Impact 5.7-4: Future development in the City of Corona would require connection to the City's sewer system. [Threshold G-5]**

## General Plan

In general, future development within the City would utilize the local sewer system:

- **IU-3.3** Build, upgrade, maintain, and expand existing sewer collection and treatment facilities where existing systems are deficient in accordance with the Sewer Master Plan and state and federal standards.

- **IU-3.4** Require that new development be connected to the municipal sewer system and ensure that adequate capacity is available for the treatment of generated sewer flows and safe disposal of sludge.

- **IU-3.6** Restrict and prioritize sewer connections, if necessary, to comply with available treatment capacity.
- **IU-3.7** Ensure that sewer connection fees and charges are reviewed annually and are sufficient to fully fund and support the construction, improvement, and rehabilitation of sewer facilities.
- **IU-3.8** Require that new development be connected to the City's sewer system..

New development is required to be connected to the City's sewer system in accordance with Policy IU-3.8. Therefore, impacts that would result from soil conditions in relation to septic tank or other on-site wastewater disposal systems would be less than significant.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect geology and soil hazards in the City or SOI. Consequently, implementation of the City's CAP would result in less than significant impacts to geology and soil hazards.

**Impact 5.7-5: Future development in the City and SOI that would be accommodated by the General Plan Update could impact known and unknown paleontological resources. [Threshold G-6]**

### General Plan

Paleontological resources are recognized as nonrenewable and therefore receive protection under the California Public Resources Code and CEQA. Adoption of the General Plan Update in itself would not directly affect paleontological resource. Long-term implementation of the General Plan Update land use plan could allow development (e.g., new development, infill development, redevelopment, and revitalization/restoration), including grading, of known and unknown sensitive areas. Grading and construction activities of undeveloped areas or redevelopment that requires more intensive soil excavation than in the past could potentially cause the disturbance of paleontological resources. Therefore, future development that would be accommodated by the General Plan Update could potentially unearth previously unrecorded resources. Review and protection of paleontological resources are also afforded by CEQA for individual development projects that would be accommodated by the General Plan Update, subject to discretionary actions that are implemented in accordance with the land use plan of the General Plan Update.

As identified in Table 5.7-3, there are multiple known fossil localities in the City and its vicinity. There are no known fossil localities in the SOI, but the numerous fossil localities in the City and surrounding area are relevant to the paleontological sensitivity of the SOI. Figure 5.7-6, *Sensitive Paleontological Resources*, and Table 5.7-4, *Paleontological Sensitivities of Geologic Formations in Corona and SOI*, identify geologic formations in the City and SOI and their potential to contain paleontological resources. The letter symbols on Figure 5.7-6 corresponds with Table 5.7-4.

Table 5.7-4 Paleontological Sensitivities of Geologic Formations in Corona and SOI

| Geologic Formation | Sensitivity[1] |
|---|---|
| Artificial Fill (Qaf) | None |
| Very young wash deposits (Qw) | Low-to-High |
| Very young landslide deposits (Qls) | Low-to-High |
| Young alluvial fan deposits (Qyf) | Low-to-High |
| Unit 1 ($Qyf_1$) | High |
| Young axial-channel deposits (Qya) | Low-to-High |
| Young landslide deposits (Qyls) | Low-to-High |
| Old alluvial-fan deposits (Qof) | High |
| Old alluvial-fan deposits, unit 3 ($Qof_3$) | High |
| Old alluvial-fan deposits, unit 1 ($Qof_1$) | High |
| Old alluvial-valley deposits (Qov) | High |
| Old landslide deposits (Qols) | High |
| Very old alluvial-fan deposits (Qvof) | High |
| Very old axial-channel deposits (Qvoa) | High |
| Sedimentary Rocks of the Norco Area (QTn) | Unknown |
| Conglomerate of Temescal Area (QTt) | Unknown |
| Fernando Formation (Tf) | High |
| Sandstone of Norco Area (Tns) | High |
| Puente Formation (Tp) | High |
| Lake Matthews Formation (Tlm) | High |
| Sycamore Canyon Member (Tpsc) | High |
| Yorba Member (Tpy) | High |
| Soquel Member (Tpsq) | High |
| Topanga Group (Tt) | High |
| Vaqueros & Sespe formations, undivided (Tvs) | High |
| Santiago Formation (Tsa) | High |
| Silverado Formation (Tsi) | High |
| Vaqueros, Sespe, Santiago, and Silverado formations, undivided (Tvss) | High |
| Ladd Formation (Kl) | High |
| Baker Canyon Member (Klbc) | High |
| Williams and Ladd formations, undifferentiated (Kwl) | High |
| Monzogranite (Kcg) | None |
| Granodiorite and quartz latite (Kcgq) | None |
| Gabbro (Kgb) | None |
| Diorite (Kd) | None |
| Granite (Kgu) | None |

Table 5.7-4 Paleontological Sensitivities of Geologic Formations in Corona and SOI

| Geologic Formation | Sensitivity[1] |
|---|---|
| Heterogeneous granite (Khg) | None |
| La Sierra Tonalite (Klst) | None |
| Mount Hole Granodiorite (Kmhg) | None |
| Micropegmatite granite (Kmp) | None |
| Estelle Mountain Volcanics (Kvem) | None[2] |
| Santiago Peak Volcanics (Kvsp) | None[3] |
| Santiago Peak Volcanics, intrusive rocks (Kvspi) | None |
| Bedford Canyon Formation (Jbc) | Low |
| Metamorphic Rocks (Trmu) | None |

Source: SWCA 2018.
[1] Following Society of Vertebrate Paleontology.
[2] Sedimentary layers, if present, have unknown sensitivity (see discussion in Section 7.2 of Appendix G).
[3] Sedimentary layers, if present, have high sensitivity (see discussion in Section 7.2 of Appendix G).

Long-term implementation of the General Plan Update could allow development, including grading, on portions of the City and SOI with sensitivity to paleontological resources. Grading and construction activities of undeveloped areas or redevelopment that requires more intensive soil excavation than in the past could potentially cause the disturbance of paleontological resources. Therefore, future development could potentially unearth previously unknown/unrecorded paleontological resources.

The General Plan includes the following policies that have the potential to reduce impacts of potential development on paleontological resources

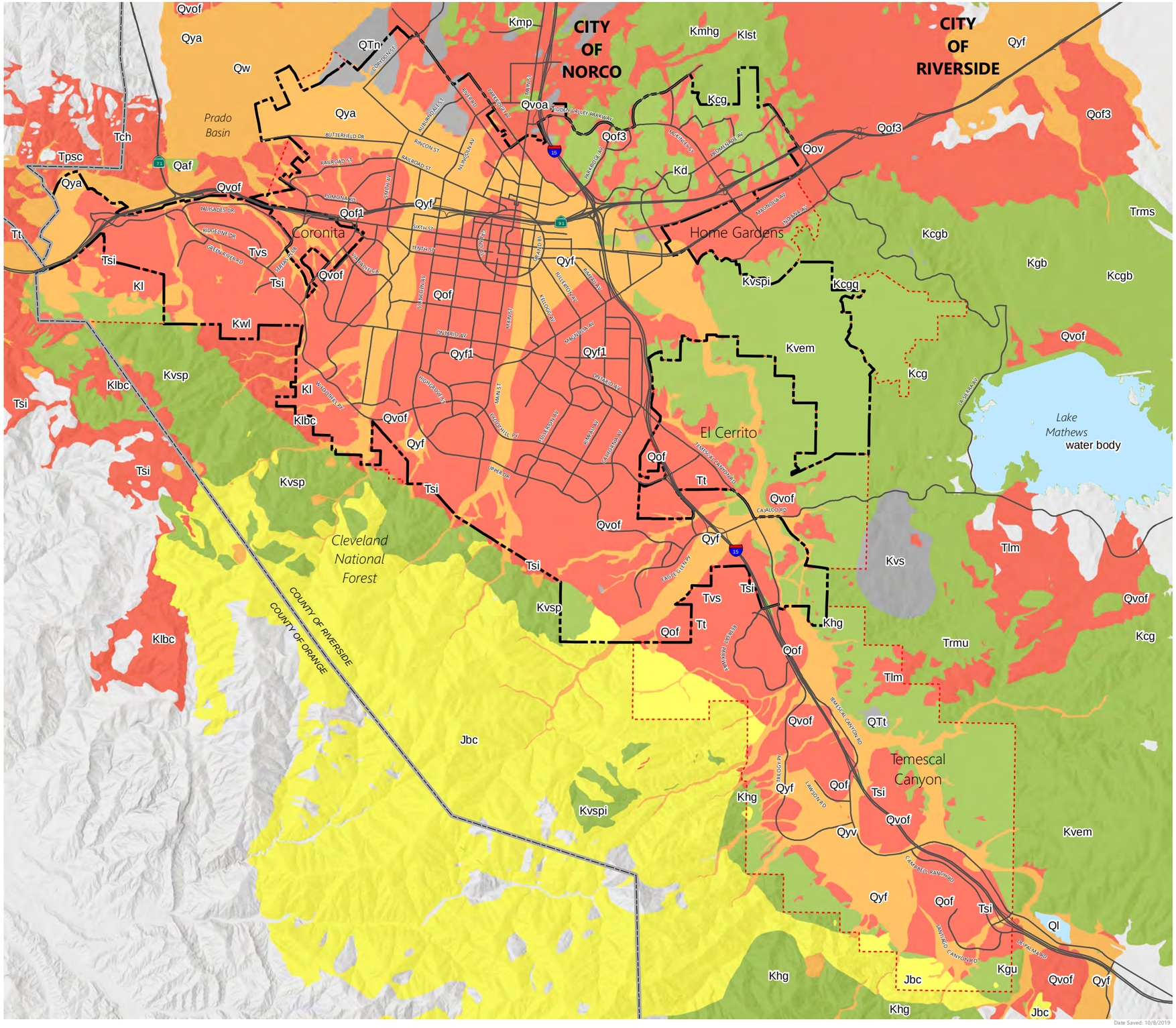
- **HR-3.2** Require that development proposals incorporate specific measures to identify, protect, and preserve cultural resources in the planning, environmental review, and development process

- **HR-3.6** Any project that involves earth-disturbing activities in soil or rock units known or reasonably suspected to be fossil-bearing shall require monitoring by a qualified paleontologist retained by the project applicant for the duration of excavation or trenching.

- **HR-3.7** Paleontological resources found prior to or during construction shall be evaluated by a qualified paleontologist, and appropriate mitigation measures applied, pursuant to § 21083.2 of CEQA, before the resumption of development activities. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the Riverside County Museum of Natural History.

Figure 5.7-6

# SENSITIVE PALEONTOLOGICAL RESOURCES




## Legend

- City Boundary
- Sphere of Influence Areas
- Unknown Sensitivity
- No Sensitivity
- Low Sensitivity
- Low-to-high Sensitivity, increasing with depth
- High Sensitivity

*Source:*
*SCWA, 2017*

Date Saved: 10/8/2019

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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It is also important to note that the General Plan Update is a regulatory document that sets the framework for future growth and development in the City and does not result in development in and of itself. Before any development or redevelopment activities can occur in the City, they must be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and state requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. Although policies in the General Plan Update would minimize impacts to paleontological resources from new development/redevelopment, soil excavations have the potential to impact paleontological resources in the City and SOI.

#### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect paleontological resources in the City or SOI. Consequently, implementation of the City's CAP would result in less than significant impacts to paleontological resources.

## 5.7.5 Existing Regulations and Standard Conditions

### 5.7.5.1 GEOLOGY AND SOILS

#### State

- Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code Sections 2621 et seq.)
- Seismic Hazards Mapping Act (California Public Resources Code Section 2695)
- California Building Code (CBC; Title 24, California Code of Regulations [CCR], Part 2)
- Unreinforced Masonry Law (California Government Code Sections 8875 et seq.)
- Natural Hazards Disclosure Act (California Civil Code Sections 1103 et seq.; California Public Resources Code Section 2694)
- National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Associated with Construction Activity (Order 2009-0009-DWQ, State Water Resources Control Board)
- California Health and Safety Code Sections 17953 to 17955 and CBC Section 1802: Requirements for Geotechnical Investigation
- California Code of Regulations Title 24 Part 5: California Plumbing Code

#### Regional

- South Coast Air Quality Management District Rules 403 and 403.2: Fugitive Dust Control

### Local

- Corona Municipal Code, Title 15 – Buildings and Construction
- California Public Resources Code Section 5097.5.

### 5.7.5.2 PALEONTOLOGICAL RESOURCES

### Federal

- Public Law 111-011, Title VI, Subtitle D – Paleontological Resources Preservation Act (PRPA) of 2009
- Antiquities Act of 1906

## 5.7.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.7-1, 5.7-2, 5.7-3 and 5.7-4.

Without mitigation, the following impact would be **potentially significant**:

- **Impact 5.7-5** Implementation of the General Plan Update would impact paleontological resources

## 5.7.7 Mitigation Measures

### Impact 5.7-5

*Paleontological Resources*

GEO-1 **High and Low-to-High Sensitivity.** In areas designated as having "high" or "low-to-high" sensitivity for paleontological resources, the project applicant shall be required to submit a Paleontological Resources Monitoring and Mitigation Plan (PRMMP). The PRMMP shall be prepared by a Qualified Paleontologist meeting the standards of Society of Vertebrate Paleontology (2010). The plan shall address specifics of monitoring and mitigation based on the project area and project's construction plan, and shall take into account updated geologic mapping, geotechnical data, updated paleontological records searches, and changes to the regulatory framework at the time of analysis. The PRMMP shall be submitted to the City of Corona's Community Development Department prior to approval of a grading permit.

GEO-2 **High Sensitivity.** Projects involving ground disturbances in previously undisturbed areas mapped as having "high" paleontological sensitivity shall be monitored by a qualified paleontological monitor on a full-time basis, under the supervision of the Qualified Paleontologist. Monitoring shall include inspection of exposed sedimentary units during active excavations within sensitive geologic sediments. The monitor shall have authority to temporarily divert activity away from exposed fossils to evaluate the significance of the find and, if the fossils are determined to be significant, professionally and efficiently recover the

fossil specimens and collect associated data. The paleontological monitor shall use field data forms to record pertinent location and geologic data, measure stratigraphic sections (if applicable), and collect appropriate sediment samples from any fossil localities.

GEO-3 **Low-to-High Sensitivity**. Projects involving ground disturbance in previously undisturbed areas mapped with "low-to-high" paleontological sensitivity shall require monitoring if construction activity exceeds the depth of the low-sensitivity surficial sediments. The underlying sediments may have high sensitivity; therefore, work in those units shall require paleontological monitoring, as designated by the Qualified Paleontologist in the Paleontological Resources Monitoring and Mitigation Plan (PRMMP).

GEO-4 **Low Sensitivity**. Projects involving ground disturbance in previously undisturbed areas mapped as having "low" paleontological sensitivity shall incorporate worker training to make construction workers aware that, although paleontological sensitivity is low, fossils might still be encountered. The Qualified Paleontologist shall oversee this training as well as remain on call in the event fossils are found.

GEO-5 **Unknown Sensitivity**. Projects involving ground disturbance in previously undisturbed areas mapped as having "unknown" paleontological sensitivity shall retain a Qualified Paleontologist to conduct a field survey of the project area to determine the sensitivity of the geologic units, after which the relevant mitigation measures (GEO-1 through GEO-4) shall be applied.

GEO-6 **All Projects**. In the event of any fossil discovery, regardless of depth or geologic formation, construction work shall halt within a 50-foot radius of the find until its significance can be determined by a Qualified Paleontologist. Significant fossils shall be recovered, prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility in accordance with the standards of the Society of Vertebrate Paleontology (2010). The most likely repository is the Natural History Museum of Los Angeles County (NHMLA). The repository shall be identified, and a curatorial arrangement shall be signed, prior to collection of the fossils.

## 5.7.8 Level of Significance After Mitigation

### Impact 5.7-5

Mitigation Measures GEO-1 through GEO-6 prescribe requirements for monitoring based on the sensitivity of sites in the City and SOI for paleontological resources. Under GEO-1, areas that range from high to low sensitivity are required to prepare a Paleontological Resources Monitoring and Mitigation Plan. With adherence to mitigation measures GEO-1 through GEO-6, Impact 5.7-5 would be less than significant.

## 5.7.9 References

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# 5.8 GREENHOUSE GAS EMISSIONS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the City of Corona General Plan Technical Update (General Plan Update) and Climate Action Plan (CAP) to cumulatively contribute to greenhouse gas (GHG) emissions impacts. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (SCAQMD). Because no single project is large enough to result in a measurable increase in global concentrations of GHG emissions, climate change impacts of a project are considered on a cumulative basis. The analysis in this section is based on buildout of the proposed project, as modeled using the California Air Resources Board's (CARB) Emissions Factor Model (EMFAC2017), the Off-Road Emissions Factor Model (OFFROAD2017), energy use provided by Southern California Edison (SCE), Corona Department of Water and Power, and the Southern California Gas Company (SoCalGas), and trip generation and vehicle miles traveled (VMT) provided by Fehr & Peers (see Appendix L to this DEIR). The GHG emissions modeling for construction and operational phases are included in Appendix D of this DEIR.

### Terminology

The following are definitions for terms used throughout this section.

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a greenhouse gas absorbs relative to a molecule of carbon dioxide ($CO_2$) over a given period of time (20, 100, and 500 years). $CO_2$ has a GWP of 1.
- **Carbon dioxide-equivalent ($CO_2e$).** The standard unit to measure the amount of greenhouse gases in terms of the amount of $CO_2$ that would cause the same amount of warming. $CO_2e$ is based on the GWP ratios between the various GHGs relative to $CO_2$.
- **$MTCO_2e$.** Metric ton of $CO_2e$.
- **$MMTCO_2e$.** Million metric tons of $CO_2e$.

## 5.8.1 Environmental Setting

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide ($CO_2$), methane ($CH_4$), and ozone ($O_3$)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide ($N_2O$), sulfur hexafluoride ($SF_6$),

hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[1,2] The major GHGs are briefly described below.

- **Carbon dioxide ($CO_2$)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

- **Methane ($CH_4$)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal landfills and water treatment facilities.

- **Nitrous oxide ($N_2O$)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 5.8-1, *GHG Emissions and Their Relative Global Warming Potential Compared to $CO_2$*. The GWP is used to convert GHGs to $CO_2$-equivalence ($CO_2e$) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fourth Assessment Report (AR5) GWP values for $CH_4$, a project that generates 10 MT of $CH_4$ would be equivalent to 280 MT of $CO_2$.[3]

[1] Water vapor ($H_2O$) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, because it is considered part of the feedback loop rather than a primary cause of change.

[2] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017a). However, state and national GHG inventories do not include black carbon yet due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

[3] $CO_2$-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

Table 5.8-1 GHG Emissions and Their Relative Global Warming Potential Compared to $CO_2$

| GHGs | Carbon Dioxide ($CO_2$) | Methane[1] ($CH_4$) | Nitrous Oxide ($N_2O$) |
|---|---|---|---|
| Second Assessment | | | |
| Atmospheric Lifetime (Years) | 50 to 200 | 12 (±3) | 120 |
| Global Warming Potential Relative to $CO_2$[2] | 1 | 21 | 310 |
| Fourth Assessment | | | |
| Atmospheric Lifetime (Years) | 50 to 200 | 12 | 114 |
| Global Warming Potential Relative to $CO_2$[2] | 1 | 25 | 298 |
| Fifth Assessment | | | |
| Atmospheric Lifetime (Years) | 50 to 200 | 12 | 121 |
| Global Warming Potential Relative to $CO_2$[2] | 1 | 28 | 265 |

Source: IPCC 1995; IPCC 2007; IPCC 2013.
[1] The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of $CO_2$ is not included.
[2] Based on 100-year time horizon of the GWP of the air pollutant compared to $CO_2$.

## California's GHG Sources and Relative Contribution

In 2019, the statewide GHG emissions inventory was updated for 2000 to 2017 emissions using the GWPs in IPCC's AR4.[4] Based on these GWPs, California produced 424.10 $MMTCO_2e$ GHG emissions in 2017. California's transportation sector was the single largest generator of GHG emissions, producing 40.1 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.7 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (9.7 percent), agriculture and forestry (7.6 percent) high GWP (4.7 percent), and recycling and waste (2.1 percent) t (CARB 2019a).

California's GHG emissions have followed a declining trend since 2007. In 2017, emissions from routine GHG emitting activities statewide were 424 $MMTCO_2e$, 5 $MMTCO_2e$ lower than 2016 levels. This represents an overall decrease of 14 percent since peak levels in 2004 and 7 $MMTCO_2e$ below the 1990 level and the state's 2020 GHG target. During the 2000 to 2017 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 $MTCO_2e$ per capita to 10.7 $MTCO_2e$ per capita in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP) is declining, representing a 41 percent decline since the 2001 peak, while the state's GDP has grown 52 percent during this period. For the first time since California started to track GHG emissions, California uses more electricity from zero-GHG sources (hydro, solar, wind, and nuclear energy). (CARB 2019b).

## Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities.

[4] Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

The amount of $CO_2$ in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation (IPCC 2007). These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants (CAT 2006). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime (IPCC 2007).

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are also hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

### Potential Climate Change Impacts for California

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide, average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). The years from 2014 through 2016 have shown unprecedented temperatures with 2014 being the warmest (OEHHA 2018). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1 to 8.6°F, depending on emissions levels (CCCC 2012).

In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures; 2) a smaller fraction of precipitation falling as snow; 3) a decrease in the

amount of spring snow accumulation in the lower and middle elevation mountain zones; 4) advanced shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms (CAT 2006). Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016, with unprecedented dry years occurring in 2014 and 2015 (OEHHA 2018). Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years occurring from 2012 to 2015 (OEHHA 2018). According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 5.8-1), and the inertia of the Earth's climate system could produce as much as 0.6°C (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 5.8-2, *Summary of GHG Emissions Risks to California*, and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

Table 5.8-2 Summary of GHG Emissions Risks to California

| Impact Category | Potential Risk |
|---|---|
| Public Health Impacts | Heat waves will be more frequent, hotter, and longer<br>Fewer extremely cold nights<br>Poor air quality made worse<br>Higher temperatures increase ground-level ozone levels |
| Water Resources Impacts | Decreasing Sierra Nevada snow pack<br>Challenges in securing adequate water supply<br>Potential reduction in hydropower<br>Loss of winter recreation |
| Agricultural Impacts | Increasing temperature<br>Increasing threats from pests and pathogens<br>Expanded ranges of agricultural weeds<br>Declining productivity<br>Irregular blooms and harvests |
| Coastal Sea Level Impacts | Accelerated sea level rise<br>Increasing coastal floods<br>Shrinking beaches<br>Worsened impacts on infrastructure |
| Forest and Biological Resource Impacts | Increased risk and severity of wildfires<br>Lengthening of the wildfire season<br>Movement of forest areas<br>Conversion of forest to grassland<br>Declining forest productivity<br>Increasing threats from pest and pathogens<br>Shifting vegetation and species distribution<br>Altered timing of migration and mating habits<br>Loss of sensitive or slow-moving species |
| Energy Demand Impacts | Potential reduction in hydropower<br>Increased energy demand |

Sources: CEC 2006a; CEC 2009; CCCC 2012; CNRA 2014.

Specific climate change impacts that could affect the project include:

- **Water Resources Impacts.** By late this century, all projections show drying, and half of the projections suggest 30-year average precipitation will decline by more than 10 percent below the historical average. This drying trend is caused by an apparent decline in the frequency of rain and snowfall. Even in projections with relatively small or no declines in precipitation, central and southern parts of the state can be expected to be drier from the warming effects alone—the spring snowpack will melt sooner, and the moisture in soils will evaporate during long dry summer months (CCCC 2012).

- **Wildfire Risks.** Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. Human activities will continue to be the biggest factor in ignition risk. The number of large fires statewide is estimated to increase from 58 percent to 128 percent above historical levels by 2085. Under the same emissions scenario, estimated burned area will increase by 57 percent to 169 percent, depending on location (CCCC 2012).

- **Health Impacts.** Many of the gravest threats to public health in California stem from the increase of extreme conditions, principally more frequent, more intense, and longer heat waves. Particular concern centers on the increasing tendency for multiple hot days in succession and heat waves occurring simultaneously in several regions throughout the state. Public health could also be affected by climate change impacts on air quality, food production, the amount and quality of water supplies, energy pricing and availability, and the spread of infectious diseases. Higher temperatures also increase ground-level ozone levels. Furthermore, wildfires can increase particulate air pollution in the major air basins of California (CCCC 2012).

- **Increase Energy Demand.** Increases in average temperature and higher frequency of extreme heat events combined with new residential development across the state will drive up the demand for cooling in the increasingly hot and longer summer season and decrease demand for heating in the cooler season. Warmer, drier summers also increase system losses at natural gas plants (reduced efficiency in the electricity generation process at higher temperatures) and hydropower plants (lower reservoir levels). Transmission of electricity will also be affected by climate change. Transmission lines lose 7 percent to 8 percent of transmitting capacity in high temperatures while needing to transport greater loads. This means that more electricity needs to be produced to make up for the loss in capacity and the growing demand (CCCC 2012).

#### 5.8.1.1 REGULATORY FRAMEWORK

This section describes the federal, state, and local regulations applicable to GHG emissions.

### Federal Laws

The U.S. Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not themselves impose any

emission reduction requirements, but allowed the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—$CO_2$, $CH_4$, $N_2O$, hydrofluorocarbons, perfluorocarbons, and $SF_6$—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the proposed project's GHG emissions inventory because they constitute the majority of GHG emissions, and, per SCAQMD guidance are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

### *US Mandatory Reporting Rule for GHGs (2009)*

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 $MTCO_2e$ or more per year are required to submit an annual report.

### *Update to Corporate Average Fuel Economy Standards (2010/2012)*

The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers were required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued new standards in 2012 for model years 2017 to 2025 that will require a fleet average of 54.5 miles per gallon in 2025. While the EPA is reexamining the 2017–2025 emissions and CAFE standards, a consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and provides industry the certainty needed to make investments and create jobs. This commitment means that the auto companies party to the voluntary agreement will only sell cars in the United States that meet these standards (CARB 2019d).

### *EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)*

Pursuant to its authority under the Clean Air Act, the EPA has been developing regulations for new, large, stationary sources of emissions, such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy rule, which became effective on August 19, 2019. The rule was crafted under the direction of President Trump's Energy Independence Executive Order. It officially rescinds the Clean Power Plan rule issued during the Obama Administration and sets emissions guidelines for states in developing plans to limit $CO_2$ emissions from coal-fired power plants.

## State Laws

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-03-05 and B-30-15, Assembly Bill 32 (AB 32), Senate Bill 32 (SB 32), and SB 375.

### *Executive Order S-03-05*

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

### *Assembly Bill 32, the Global Warming Solutions Act (2006)*

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in the Global Warming Solutions Act. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05.

#### *CARB 2008 Scoping Plan*

The final Scoping Plan was adopted by CARB on December 11, 2008. The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be approximately 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state (CARB 2008). In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

#### *First Update to the Scoping Plan*

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan was adopted at the May 22, 2014, board hearing. The update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher at 431 $MMTCO_2e$ (CARB 2014).

As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the update also addresses the state's longer-term GHG goals within a post-2020 element. The post-2020 element provides a high level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing

toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014).

### *Executive Order B-30-15*

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

### *Senate Bill 32 and Assembly Bill 197*

In September 2016, Governor Brown signed Senate Bill 32 and Assembly Bill 197 into law, making the Executive Order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

#### *2017 Climate Change Scoping Plan Update*

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB approved the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b).

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conserve agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and TACs emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZEV buses and trucks;
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030);

- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030;
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks;
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing methane and hydroflurocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030;
- Continued implementation of SB 375;
- Post-2020 Cap-and-Trade Program that includes declining caps; and
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the state's long-term GHG reduction goals and recommended local actions to reduce GHG emissions—for example, statewide targets of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust and quantitative locally appropriate goals that align with the statewide per capita targets and sustainable development objectives, and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the state's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population) consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the "business as usual" yardstick—that is, what would the GHG emissions look like if the state did nothing at all beyond the policies that are already required and in place to achieve the 2020 limit, as shown in Table 5.8-3, *2017 Climate Change Scoping Plan Emissions Reductions Gap to Achieve the 2030 GHG Target*. It includes the existing renewables requirements, advanced clean cars, the "10 percent" LCFS, and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 $MMTCO_2e$ above the target in 2030. If the estimated GHG reductions from the known commitments are not

realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

Table 5.8-3 2017 Climate Change Scoping Plan Emissions Reductions Gap to Achieve the 2030 GHG Target

| Modeling Scenario | 2030 GHG Emissions $MMTCO_2e$ |
|---|---|
| Reference Scenario (Business-as-Usual) | 398 |
| With Known Commitments | 320 |
| 2030 GHG Target | 260 |
| Gap to 2030 Target | 60 |

Source: CARB 2017b.

Table 5.8-4, *2017 Climate Change Scoping Plan Emissions Change by Sector to Achieve the 2030 Target*, provides estimated GHG emissions by sector at 1990 levels, and the range of emissions for each sector estimated for 2030.

Table 5.8-4 2017 Climate Change Scoping Plan Emissions Change by Sector to Achieve the 2030 Target

| Scoping Plan Sector | 1990 $MMTCO_2e$ | 2030 Proposed Plan Ranges $MMTCO_2e$ | % Change from 1990 |
|---|---|---|---|
| Agricultural | 26 | 24-25 | -4% to -8% |
| Residential and Commercial | 44 | 38-40 | -9% to -14% |
| Electric Power | 108 | 30-53 | -51% to -72% |
| High GWP | 3 | 8-11 | 267% to 367% |
| Industrial | 98 | 83-90 | -8% to -15% |
| Recycling and Waste | 7 | 8-9 | 14% to 29% |
| Transportation (including TCU) | 152 | 103-111 | -27% to -32% |
| Net Sink[1] | -7 | TBD | TBD |
| Sub Total | 431 | 294-339 | -21% to -32% |
| Cap-and-Trade Program | NA | 34-79 | NA |
| Total | 431 | 260 | -40% |

Source: CARB 2017b
Notes: TCU = Transportation, Communications, and Utilities; TBD: To Be Determined.
[1] Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

### *Senate Bill 375*

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle

trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

### *2017 Update to the SB 375 Targets*

CARB is required to update the targets for the MPOs every eight years. CARB adopted revised SB 375 targets for the MPOs in March 2018. The updated targets become effective on October 1, 2018; and are therefore, applicable for the 2019 RTP/SCS update being initiated by SCAG. CARB's updated SB 375 targets for the SCAG region are an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018).

The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32), while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies, and any potential future state strategies, such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCS to achieve the SB 375 targets. CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies (CARB 2018).

### *SCAG's 2016-2040 RTP/SCS*

SB 375 requires the MPOs to prepare a sustainable communities strategy in their regional transportation plan. For the SCAG region, the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was adopted on April 7, 2016, and is an update to the 2012 RTP/SCS (SCAG 2016). In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce VMT from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

SCAG's targets for the 2016-2040 RTP/SCS were 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010a). The 2016-2040 RTP/SCS projects that the SCAG region will meet or exceed the passenger per capita targets set in 2010 by CARB. It is projected that VMT per capita in the region for year 2040 would be reduced by 7.4 percent with implementation of the 2016-2040 RTP/SCS compared to a no-plan year 2040 scenario. Under the 2016-2040 RTP/SCS, SCAG anticipates lowering GHG emissions 8 percent below 2005 levels by 2020, 18 percent by 2035, and 21 percent by 2040. The 18 percent reduction by 2035 over 2005 levels represents a 2 percent increase in reduction compared to the 2012 RTP/SCS projection. Overall, the SCS is meant to provide

growth strategies that will achieve the regional GHG emissions reduction targets. Land use strategies to achieve the region's targets include planning for new growth around high quality transit areas and livable corridors, and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles (SCAG 2016). However, the SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS; instead, it provides incentives to governments and developers for consistency.

### *Transportation Sector Specific Regulations*

#### *Assembly Bill 1493*

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

#### *Executive Order S-01-07*

On January 18, 2007, the state set a new low carbon fuel standard (LCFS) for transportation fuels sold within the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

#### *Executive Order B-16-2012*

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directs the number of zero-emission vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions from the transportation sector 80 percent below 1990 levels.

### *Heavy-Duty (Tractor-Trailer) GHG Regulation*

The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of three components:

- **SmartWay Transport Partnership:** Freight shippers, carriers, logistics companies and other stakeholders partner with EPA to measure, benchmark and improve logistics operations so they can reduce their environmental footprint.

- **SmartWay Brand:** Through SmartWay technology verification and branding, EPA has accelerated availability, adoption and market penetration of fuel-saving technologies and operational practices while helping companies save fuel, lower costs and reduce adverse environmental impact.

- **SmartWay Global Collaboration:** EPA works with a broad range of national and global organizations to harmonize sustainability accounting methods in the freight sector. SmartWay also provides support to global policy makers that wish to model transportation sustainability programs after the SmartWay program. (USEPA 2019a)

Through the SmartWay Technology Program, the USEPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. As a result, the USEPA has determined that the following types of technologies provide fuel-saving and/or emission-reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies—i.e., less idling of the engine when it is not needed—would reduce fuel consumption.

- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.

- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel will eventually slow down because of this resistance.

- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc. that would reduce emissions.

- Federal excise tax exemptions. (USEPA 2019b)

#### *Phase I and 2 Heavy-Duty Vehicle GHG Standards*

CARB has adopted a new regulation for GHG emissions from heavy-duty trucks and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the USEPA rule for new trucks and engines nationally. Existing heavy-duty vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer Greenhouse Gas Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation.

In September 2011, the USEPA adopted their new rule for heavy-duty trucks and engines. The USEPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements begin with model year (MY) 2014 with stringency levels increasing through MY 2018. The rule organizes truck compliance into three groupings, which include a) heavy-duty pickups and vans; b) vocational vehicles; and c) combination tractors. The USEPA rule does not regulate trailers.

CARB staff has worked jointly with the USEPA and the National Highway Traffic Safety Administration (NHTSA) on the next phase of federal GHG emission standards for medium- and heavy-duty vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later model year heavy-duty vehicles, including trailers.

The USEPA and NHTSA issued a Notice of Proposed Rulemaking for Phase 2 in June 2015 and published the final rule in October 2016. On February 8, 2018 the Board approved the proposed Phase 2 standards, with direction to staff to make additional 15-day changes (CARB 2019c, USEPA 2019c).

### *Renewables Portfolio – Carbon Neutrality Regulations*

#### *Senate Bills 1078, 107, X1-2, and Executive Order S-14-08*

A major component of California's Renewable Energy Program is the RPS established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08 was signed in November 2008, which expanded the state's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SBX1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from

development projects, because electricity production from renewable sources is generally considered carbon neutral.

#### *Senate Bill 350*

Senate Bill 350 (de Leon), was signed into law September 2015. SB 350 establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

#### *Senate Bill 100*

On September 10, 2018, Governor Brown signed SB 100, which replaces the SB 350 requirement of 45 percent renewable energy by 2027 with the requirement of 50 percent by 2026 and also raises California's RPS requirements for 2050 from 50 percent to 60 percent. SB 100 also establishes RPS requirements for publicly owned utilities that consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Furthermore, the bill also establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

#### *Executive Order B-55-18*

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

### *Energy Efficiency Regulations*

#### *California Building Code: Building Energy Efficiency Standards*

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2016 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards, which were recently adopted on May 9, 2018, go into effect starting January 1, 2020.

The 2016 Standards improve upon the previous 2013 Standards for new construction of and additions and alterations to residential and nonresidential buildings. Under the 2016 Standards, residential and nonresidential buildings are generally 28 and 5 percent more energy efficient than the 2013 Standards, respectively (CEC 2015). Although the 2016 standards do not achieve zero net energy, they get very close to the state's goal and take important steps toward changing residential building practices in California.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

#### *California Building Code: CALGreen*

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.[5] The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and were last updated in 2016. The 2016 Standards became effective on January 1, 2017. The CEC adopted the voluntary standards of the 2019 CALGreen on October 3, 2018. The 2019 CALGreen standards become effective January 1, 2020.

#### *2006 Appliance Efficiency Regulations*

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

### Solid Waste Diversion Regulations

#### *AB 939 – Integrated Waste Management Act of 1989*

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were

[5] The green building standards became mandatory in the 2010 edition of the code.

modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

#### *AB 341*

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of the CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

#### *AB 1327*

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

#### *AB 1826*

In October of 2014 Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

### *Water Efficiency Regulations*

#### *SBX7-7*

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

#### *AB 1881 – Water Conservation in Landscaping Act*

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including

irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

### *Short-Lived Climate Pollutant Reduction Strategy*

#### ***Senate Bill 1383***

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and $CH_4$. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 requires the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also establishes targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017a). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. SCAQMD is one of the air districts that requires air pollution control technologies for chain-driven broilers, which reduces their particulate emissions by over 80 percent (CARB 2017a). Additionally, SCAQMD Rule 445 limits installation of new fireplaces in the South Coast Air Basin.

## Local Laws and Programs

### *City of Corona Climate Action Plan*

The City has an adopted Climate Action Plan prepared in 2012 with a purpose of encompassing the energy conservation and air quality goals contained in the Environmental Resources Element of the City's General Plan. The current CAP established a GHG reduction goal consistent with AB 32, which is to reduce emissions associated with the City to levels at or below 1990 levels by year 2020. Specifically, the current CAP set a year 2020 Reduction Target of 1,483,963 $MTCO_2e$ for the City, which is 15 percent below 2008 levels. The current CAP is a dynamic document and includes a monitoring component to track progress in meeting the 2020 Reduction Target and to develop post-2020 targets. Additionally, the CAP is also to be updated as necessary to meet the post-2020 long-term goal of reducing GHG emissions to 80 percent 1990 levels by 2050 as established under EO S-03-05 (Corona 2012).

To meet the established 2020 Reduction Target, the current CAP includes various reduction measures across several sectors that include transportation, energy, water, solid waste, and agriculture. The reduction measures encompass both state- and local-based measures. State-based measures are measures identified under AB 32 in reducing GHG emissions (e.g., public utilities meeting the RPS). Local-based measures are measures the City can implement that are beyond statewide measures under AB 32. For example, Measure R2-E1 requires new residential buildings to be 20 percent more energy efficient than the Title 24 standards. Overall, the reduction

measures are estimated to reduce community wide emissions by 481,286 $MTCO_2e$ compared to year 2020 business as usual emissions and by 262,892 $MTCO_2e$ compared to 2008 emissions (Corona 2012).

### 5.8.1.2 EXISTING CONDITIONS

- An emissions inventory of the City of Corona and SOI was conducted for the existing residential, institutional, commercial, office, and industrial uses identified on Figure 3-4, *Existing Land Use*. GHG emissions generated in the City and SOI were estimated using EMFAC2017, OFFROAD2017, and data provided by SCE (electricity), SoCalGas (natural gas), and the City of Corona (electricity and water use), and summarized in Table 5.8-5, *Existing City and SOI GHG Emissions Inventory*.

**Table 5.8-5 Existing City and SOI GHG Emissions Inventory**

| Sector | Existing (CEQA Baseline) 2018 GHG Emissions | |
|---|---|---|
| | $MTCO_2e$/year | Percent of Total |
| Transportation[1] | 617,849 | 50% |
| Energy – Residential[2] | 226,671 | 18% |
| Energy – Nonresidential[2] | 319,752 | 26% |
| Solid Waste[3] | 34,616 | 3% |
| Water/Wastewater[4] | 28,802 | 2% |
| Other – Off-Road Equipment[5] | 19,473 | 2% |
| Existing Community-Wide Emissions Total | 1,247,164 | 100% |
| Service Population (SP)[6] | 277,948 | NA |
| $MTCO_2e$/Year/SP | 4.5 $MTCO_2e$/Year/SP | NA |

Note: Emissions may not total 100 percent due to rounding. Based on GWPs in the IPCC Fifth Assessment Report (AR5).

1 EMFAC2017 Version 1.0.2. Based on daily VMT provided by Fehr & Peers. Transportation sector includes the full trip length for internal-internal trips and 50 percent trip length for external-internal/internal-external trips. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

2 Electricity usage is provided by SCE and Corona Department of Water and Power. Natural gas usage data provided by SoCalGas. The carbon intensity of the purchased electricity is based on SCE 2018 reported $CO_2e$ intensity factor of 507 lbs/MWh (SCE 2019). For natural gas, the intensity factors for $CO_2$, $CH_4$, and $NO_2$ are from the LGOP, version 1.1 (CARB 2010b).

3 Landfill Emissions Tool Version 1.3 and CalRecycle. Waste generation based on waste commitment for the City of Corona obtained from CalRecycle and adjusted to account for solid waste associated with the SOI. Assumes 75 percent of fugitive GHG emissions are captured within the landfill's gas capture system. The landfill gas capture efficiency is based on CARB's Local Government Operations Protocol (LGOP), version 1.1. Significant $CH_4$ production typically begins one or two years after waste disposal in a landfill and continues for 10 to 60 years or longer. Therefore, the highest $CH_4$ emissions from waste disposal in a given year are reported.

4 LGOP, version 1.1, based on the water demand and wastewater usage provided by the Fuscoe Engineering.

5 OFFROAD2017 Version 1.0.1. Light commercial equipment emissions estimated based on employment for the City of Corona as a percentage of Riverside County. Construction emissions estimated based on housing permit data for Riverside County and the City of Corona from the US Census. Agricultural emissions estimated based on agricultural jobs in the City of Corona as a percentage of Riverside County. Area sources exclude emissions from fireplaces and consumer products.

6 Approximately 165,366 residents and 70,972 employees within the City of Corona and 37,264 residents and 4,346 employees in the SOI.

Emissions in the City and SOI come from the following sources:[6]

- **Transportation:** Emissions from vehicle trips beginning and ending in the City and SOI boundaries and from external/internal vehicle trips (i.e., trips that either begin or end in the City and SOI).
- **Energy:** Emissions generated from purchased electricity and natural gas consumption used for cooking and heating in the City and SOI.
- **Solid Waste Disposal:** Indirect emissions from waste generated in the City and SOI.
- **Water/Wastewater:** Emissions from electricity used to supply, treat, and distribute water based on the overall water demand and wastewater generation in the City and SOI.
- **Area Sources:** Emissions generated from light commercial equipment, agricultural, and construction equipment use in the City and SOI.

## 5.8.2 Thresholds of Significance

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

GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

### 5.8.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

SCAQMD has adopted a significance threshold of 10,000 $MTCO_2e$ per year for permitted (stationary) sources of GHG emissions for which SCAQMD is the designated lead agency. To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) in September 2010, SCAQMD identified a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency (SCAQMD 2010a). This following tiered approach has not been formally adopted by SCAQMD.

[6] Life-cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions, found that life-cycle analysis was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during operation or construction phases of the Proposed Project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life-cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

- **Tier 1.** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (e.g., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3.** If GHG emissions are less than the screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. Project-related GHG emissions include on-road transportation, energy use, water use, wastewater generation, solid waste disposal, area sources, off-road emissions, and construction activities. The SCAQMD Working Group identified that because construction activities would result in a "one-time" net increase in GHG emissions, construction activities should be amortized into the operational phase GHG emissions inventory based on the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation. The SCAQMD identified a screening-level threshold of 3,000 $MTCO_2e$ annually for all land use types. This interim bright-line screening-level criteria are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line threshold. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions. Between the three identified thresholds, SCAQMD recommends use of the 3,000 $MTCO_2e$ interim bright-line screening-level criterion for all project types (SCAQMD 2010b).

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.

  SCAQMD has identified an efficiency target for projects that exceed the bright-line threshold: a 2020 efficiency target of 4.8 $MTCO_2e$ per year per service population ($MTCO_2e$/year/SP) for project-level analyses and 6.6 $MTCO_2e$/year/SP for plan-level projects (e.g., general plans). Service population is generally defined as the sum of residential and employment population of a project. The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.[7]

For purposes of this analysis, the bright-line threshold of 3,000 $MTCO_2e$/yr is utilized to determine the project impact for horizon year 2040. In addition, the post-2020 reduction target and goal set by SB 32 and Executive Order S-03-05, respectively, are also utilized to determine project significance for year 2030 and year 2050.

[7] SCAQMD took the 2020 statewide GHG reduction target for "land use only" GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

## 5.8.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential GHG emissions impacts as a result of implementation of the proposed project.

### Circulation Element

#### *Local Thoroughfares and Routes*

- **CE-1.1** Implement complete streets by limiting capacity to only serve expected demand on City streets (e.g., do not overbuild roadways) while discouraging regional cut-through and maximizing accessibility for users to adjacent land uses in a safe and efficient way.
- **CE-1.4** Design and employ traffic control measures to ensure City streets and roads function with safety and efficiency.
- **CE-1.7** Limit driveway and local street access on arterial streets to maintain a desired quality of traffic flow. Wherever possible, consolidate driveways and implement access controls during redevelopment of adjacent parcels.
- **CE-1.10** Require a traffic analysis to be prepared in accordance with the City's adopted Traffic Impact Study Guidelines and require projects to mitigate impacts on the City's circulation system that exceed the City's adopted service thresholds for near term and future conditions.

#### *Intercity and Regional Transportation*

- **CE-2.1** Support RCTC and Caltrans efforts to improve management of the SR-91, I-15, and SR-71. Promote improvements that reduce regional cut-through traffic on City streets and work with RCTC and Caltrans to ensure that accessibility to these facilities is provided to Corona residents.
- **CE-2.2** Support regional transportation infrastructure that would provide alternative connections and access to neighboring counties and reduce the volume of cut-through traffic on City streets.

#### *Transportation Management*

- **CE-3.1** Implement and maintain traffic signal coordination and advanced traffic management strategies throughout the City to the maximum extent practicable and integrate signal systems with adjacent jurisdictions and Caltrans.
- **CE-3.2** Implement, maintain, and enforce the traffic demand and system management recommendations in the South Coast Air Quality Management District's Air Quality Management Plan and in the Riverside County Congestion Management Program.
- **CE-3.3** Encourage employers to reduce vehicular trips by offering to employees commute trip reduction programs, such as transit fare subsidies, alternative work schedules and telecommuting, employer-sponsored van pools or shuttles, ride share programs, and bike share.

### *Public Transportation*

- **CE-4.1** Maintain local fixed-route and demand-responsive transit service to ensure mobility within Corona and to ensure that users have adequate access to public facilities, services, and employment options.
- **CE-4.2** Work with the Riverside Transit Agency to identify needs for additional bus services and enhancements to existing services.
- **CE-4.3** Encourage the development of additional regional public transportation services and facilities, including park-and-ride near the SR-91 and I-15 freeways and mobility hubs at key transit stations.
- **CE-4.4** Ensure public transit opportunities (e.g., fixed-route buses, paratransit) for elderly and disabled persons and accessibility of such services by elderly and disabled persons.
- **CE-4.5** Encourage employers to reduce single-occupant vehicular trips by providing employee incentives (e.g., reduced rate transit passes).
- **CE-4.6** Require new development to provide transit facilities, such as bus shelters and turnouts, where deemed necessary, to encourage the use of transit and other alternative forms of transportation.
- **CE-4.7** Preserve options for expanding future transit use when designing improvements for roadways or redeveloping major developments and including areas for transit facilities.
- **CE-4.8** Encourage access to and the expansion of regional rail transportation facilities and services at the Metrolink stations to increase ridership.
- **CE-4.9** Encourage the development of bus rapid transit systems along major transportation corridors where feasible.
- **CE-4.10** Improve first/last mile connections to improve transit use and accessibility. Explore use of transportation network companies, micro-transit, and other emerging technologies to strengthen the transit system.

### *Bicycle and Pedestrian Facilities*

- **CE-5.1** Provide for safety of bicyclists, equestrians, and pedestrians by adhering to national standards and uniform practices; adhere to accessibility requirements for people with disabilities.
- **CE-5.2** Maintain existing pedestrian facilities and encourage new development to provide walkways between and through developments.
- **CE-5.3** Provide for safe accessibility to and use of pedestrian facilities by people with disabilities to implement accessibility requirements under the American with Disabilities Act.

- **CE-5.4** Develop bicycle routes in accordance with the City's adopted Bicycle Master Plan and implement other elements of that plan.

- **CE-5.5** Develop and maintain a bikeway system that provides connections to routes of neighboring jurisdictions and regional bikeways.

- **CE-5.6** Encourage new and existing development to provide accessible and secure areas for bicycle storage. Provide bicycle racks or storage facilities at public facilities and require bicycle parking, storage, and other support facilities as part of new office and retail developments.

- **CE-5.7** Use easements and/or rights-or-way along flood control channels, public utilities, railroads, and streets wherever possible for bikeways and equestrian and hiking trails.

- **CE-5.8** Improve bicycling and pedestrian safety by minimizing conflict points (e.g., bicycle and vehicle crossings) with motorized traffic, separating bike routes and truck routes where possible, or adding and improving existing facilities with buffers/barriers to separate bikes from vehicle lanes.

- **CE-5.9** Coordinate with the Riverside County General Plan and the Santa Ana River Trails Plan to create an uninterrupted Class I bicycle route through Corona that connects to the Santa Ana River Trail in surrounding cities.

- **CE-5.10** Encourage and support safe bicycle riding on City streets. Provide bicycle safety and education programs through public outreach. Support future bikeway designs that minimize bicycle conflicts with vehicles, separate bikeways from vehicles where possible, and lower bicycle level of stress.

### *Goods Movement*

- **CE-6.1** Provide primary truck routes on selected arterial streets that will serve the business community while minimizing the impacts of through truck traffic into residential areas.

- **CE-6.2** Provide appropriately designed and maintained roadways in accordance with local, state, and federal standards for truck routes so that they can safely accommodate truck travel.

- **CE-6.3** Develop appropriate treatments along local truck routes to minimize noise and vibration impacts on sensitive land uses that are adjacent to or impacted by the truck route.

- **CE-6.4** Ensure that new development provides adequate on-site truck loading facilities and enforce prohibition of queuing of trucks on public streets or in other areas not intended for such uses.

- **CE-6.5** Monitor traffic and safety crossing conditions at grade railroad crossings; support at-grade and grade-separated improvements, when warranted, to improve local commerce, flow of traffic, or safety.

- **CE-6.6** Strive to minimize through truck traffic in residential neighborhoods and other areas not intended for such travel, and enforce City codes that restrict or prohibit trucks on certain streets.

- **CE-6.7** Work closely with other agencies on implementing improvements along the BNSF Transcomm route to facilitate rail movements, minimize roadway congestion, and reduce impacts on City roadways.

### *Parking*

- **CE-7.3** Encourage employers to include strategic parking provisions in new developments, where feasible, to encourage the use of transit and other modes of travel rather than single-occupancy autos.

- **CE-7.4** Accommodate joint use of parking facilities as part of an area plan or site plan, based on the peak parking demands of permitted uses in the planning area.

- **CE-7.5** Encourage the use of shared parking arrangements in areas with parking shortfalls, downtown and in appropriate mixed-use projects, and along the Sixth Street Mixed Use Boulevard corridor.

## Land Use Element

### *Type, Distribution, and Form of Land Uses*

- **LU-1.2** Emphasize the development of uses that sustain Corona as a cohesive, distinct, and self-sustaining community and minimize the need for residents to travel to surrounding communities for retail goods, services, and employment.

### *Community Quality and Sense of Space*

- **LU-6.1** Promote sustainable features in new construction and significant renovations, including the use of locally sourced, recycled, and sustainable-sourced building materials, energy- and water-efficient building design, integrated renewable energy and energy storage systems, and waste minimization during construction.

- **LU-6.2** Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through:

    - Site design—concentration and intermixing of development to minimize vehicular trips and promote walking and building orientation for solar access and heat gain and loss

    - Landscaping—drought-tolerant species, use of recycled water for irrigation, and other purposes

    - Capture of rainwater and re-use on site

    - Building design and construction materials—energy-and water efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques

### *Residential Neighborhoods*

- **LU-8.2** Provide opportunities for the development of new housing adjacent to the Downtown and the Sixth Street corridor, which may include a variety of housing types, including mixed use projects, that integrate housing with commercial and office uses..

- **LU-8.3** Provide opportunities for housing that are in pace with adopted state legislation and allow for a variety of housing types such as integrating residential with commercial and office developments, near activity centers and in transit oriented areas near the Metrolink Station.

- **LU-8.4** Provide opportunities for "live-work" development to accommodate artists, craft persons, and professionals working from home as a buffer between residential and nonresidential uses in Downtown, North Main Street, and adjoining commercial and industrial corridors and districts.

- **LU-10.6** Establish a multi-use trail system that connects the rural and estate neighborhoods adjoining open spaces and parklands. These may be developed for pedestrians, bicycles, and/or for horseback riding where allowed by zoning.

### *Commercial and Office Districts*

- **LU-11.2** Maintain a range of retail commercial and office uses and districts in the City that are differentiated by their functional role, customer base, and physical form and character. Such districts include

  - Mixed-use Downtown that serves as the center of Corona's identity and activity; provides a wide range of retail, commercial, and specialty goods; and is designed and developed to emphasize pedestrian activity.

  - Community retail districts that contain larger-format uses, national retailers, restaurants, and overnight accommodations, that serve the region and the local community, generally located in proximity to freeway off-ramps.

  - Neighborhood shopping districts providing basic goods and services, such as grocery stores and personal services, within easy access and that are intended to serve the needs of residents living in nearby neighborhoods.

- **LU-11.6** Require that transit-supporting facilities, such as bus turnouts, passenger drop-offs, and shelters, be incorporated in new commercial centers or when subject to major renovation and improvement, where appropriate to support local, citywide, and regional transit systems. The location and type of facility should be coordinated with transit agencies.

### *Industrial Districts*

- **LU-12.7** Regulate the development of industrial uses (consistent with local regulation and state law) that use, store, produce, or transport toxic and hazardous materials; generate unacceptable levels of air or noise pollution; or result in other adverse impacts.

- **LU-13.1** Accommodate mixed-use projects that integrate housing with retail, office, and other uses within the same structure or on the same site, or the development of the property exclusively for commercial and office uses in accordance with the land use plan's designations and applicable density standards and design and development policies.

- **LU-13.2** Limit retail commercial and professional office uses within a mixed-residential-commercial/office use development to those uses that are compatible with residential uses.

- **LU-13.3** Require that adequate open space and, for larger projects, recreational facilities be incorporated into mixed-use development projects to meet the need of their residents and improve overall aesthetics.

### Healthy Community Element

#### *Reduction in Pollution Exposure*

- **HC-2.5** Require the preparation of air quality, noise, and vibration technical studies to determine the impact of proposed new development on adjacent and surrounding land uses and to identify the appropriate measures required to mitigate such impacts.

### Housing Element (2013-2021)

- **HE-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

- **HE-1.4** Support the development of sustainable projects that reduce demand for water and energy resources, reduce commute times and operational costs, and provide for transit.

### Environmental Resources Element

#### *Air Resources*

- **ER-12.1** Promote and encourage alternate employment work schedules for public- and private-sector businesses to achieve a reduction of employee-related motor vehicle emissions in accordance with SCAQMD Rule 2202.

- **ER-12.2** Continue to cooperate with the SCAQMD and other local authorities in the air basin, in implementing air emission reduction programs and techniques.

- **ER-12.3** Establish and strictly enforce controls on land use activities that contain operations or materials that individually or cumulatively add significantly to the degradation of air quality in Corona.

- **ER-12.4** Continue to expand the City-owned fleet of vehicles to alternative fuels, such as methanol or other clean-burning energy sources, as technology becomes feasible and cost-effective.

- **ER-12.5** Increase public transit ridership by periodically adjusting local routes, where feasible, and working with regional transit providers serving Corona and its Planning Area.

- **ER-12.6** Support major commercial centers and employment center projects, having 100 or more employees, to incorporate transit amenities, access points, and van and carpool parking as part of the project.

- **ER-12.7** Increase the number of Park and Ride locations within the Planning Area to encourage carpooling and vanpooling.

- **ER-12.8** Require new commercial and industrial development and redevelopment projects of sufficient scale and number of employees to provide adequate facilities for bicycles, such as bicycle racks located close to the front entranceways of buildings and shower facilities with lockers.

- **ER-12.9** Continue to incorporate bicycle lanes in all new and upgrade roadway projects in order to encourage commuter bicycle trips. Also, improve existing bicycle lanes for greater user safety.

- **ER-12.10** Support mixed-use commercial-residential development and continue to target residential development within and near existing planned activity centers and transportation corridors to improve the City's current jobs-housing ratio and reduce the number of vehicle trips.

- **ER-12.11** Require that large-scale master-planned residential communities incorporate pedestrian and cycling paths/trails that link with adjacent neighborhoods, schools, areas of shopping and employment, community centers, other places of activity, and transit access points.

- **ER-12.12** Provide effective utility of pedestrian and cycling paths/trails and place strong limitations on intrusions into these rights-of-way used for pedestrian and bicycling.

- **ER-12.14** Reduce energy consumed by commercial and residential uses by requiring the use and installation of energy conservation features in all new construction projects and wherever feasible, retrofitting existing and redevelopment projects.

- **ER-13.1** Maintain and periodically update a comprehensive Climate Action Plan that detail the City's strategies to reduce GHG emissions and to ensure ongoing and sustained reduction of GHG emissions from all sectors to meet 2020, 2030, and 2040 reduction targets.

- **ER-13.2** Encourage the maximum feasible energy efficiency in site design, building orientation, landscaping, and utilities/infrastructure for all development and redevelopment projects (residential, commercial, industrial, and public agency) to support GHG emissions reductions.

- **ER-13.3** Evaluate opportunities to reduce energy use and the urban heat island effect through site and building design, materials and landscaping, such as reflective roofs or pavement, vegetated roofs, pervious pavement, shade trees, and re-vegetation of paved areas.

- **ER-13.4** Support the increase of clean energy supply to existing and new development and municipal facilities through means to include, but not be limited to: onsite or other local renewable energy sources for new and existing buildings and infrastructure.

- **ER-13.5** Increase use of clean fuel and electric vehicles in the city through the support of the installation of electric vehicle infrastructure; explore opportunities to incentivize and/or facilitate installation of electric vehicle charging stations at convenient locations in Corona.

- **ER-13.6** Reduce solid waste sent to the landfills and associated community-wide GHG emissions by ensuring all properties have access to curbside solid waste, recycled materials, and green/organic waste programs; target special programs for construction debris, household hazardous waste, etc.

- **ER-13.7** Support a wide variety of transportation related measures (e.g., active transportation, increased bus and rail transit, transportation system and demand management, etc.) as articulated in the Circulation Element to reduce the number of vehicle miles traveled in Corona.

### Infrastructure and Utilities Element

#### *Resource Conservation*

- **IU-2.1** Continue to implement the City's water conservation and reuse efforts; review these programs regularly, and modify them as appropriate and feasible.

- **IU-2.2** Establish guidelines and standards for water conservation and actively promote use of water-conserving devices and practices in new construction, major alterations and additions to existing buildings, and retrofitting of irrigation systems where feasible.

- **IU-2.3** Require incorporation of best available technologies for water conservation, internally and externally, in new construction and associated site design.

- **IU-2.4** Expand the recycled water program to provide water for landscaped medians and other appropriate open spaces along SR-91 and I-15, in coordination with Caltrans when feasible.

- **IU-2.5** Require that sewer flows be minimized in existing and future developments through water conservation and recycling efforts.

- **IU-2.6** Encourage the use of recycled water by industrial, commercial, and institutional users through the use of incentives such as differential pricing; require recycled water use for landscaped irrigation, grading, and other noncontact uses in new projects, where feasible.

- **IU-2.7** Require the use of recycled water for landscaped irrigation, grading, and other noncontact uses in new developments, parks, golf courses, sports fields, and comparable uses, where feasible.

- **IU-2.8** Continue to provide and support public educational efforts to residents, business, and students regarding the importance of water conservation and recycled water use.

- **IU-2.9** Require that grading plans be designed and implemented to reduce stormwater runoff by capturing rainwater onsite and storing on a temporary, short-term basis to facilitate groundwater recharge rather than relying solely on community drainage facilities.

- **IU-2.10** Require the use of rainwater capture and storage facilities, techniques, and improvements in residential and nonresidential developments to further objectives for water conservation

### *Solid Waste Management*

- **IU-6.1** Provide an adequate and orderly system for collection and recycling or disposal of solid waste for new and existing development in the City and sphere of influence.

- **IU-6.2** Monitor the adequacy of solid waste collection and recycling, including organic and electronic waste, for commercial, industrial, and residential developments for compliance with state law.

- **IU-6.3** Coordinate with Riverside County to ensure the City's continued use of the El Sobrante Landfill and adherence to county, state, and federal environmental regulations and local priorities.

- **IU-6.4** Encourage and support local, regional, and statewide efforts to reduce the solid waste stream; implement a waste reduction and recycling program within all City offices and facilities.

- **IU-6.5** Continue to operate and expand source reduction, reuse, recycling, and composting efforts to continue to reduce waste generation citywide and achieve state-mandated waste diversion goals.

- **IU-6.6** Continue and enhance public educational programs promoting reuse, recycling, composting, and the safe disposal of waste.

- **IU-6.7** Continue to work with providers and businesses to educate the community and to provide household hazardous material, used oil, and electronic waste collection for the community.

### *Energy*

- **IU-7.2** Coordinate with energy providers and the City Department of Power and Water to ensure that adequate services and facilities will meet SB 100 guidelines and the demand of existing and future developments, and be compatible with adjacent uses in Corona.

- **IU-7.3** Encourage energy providers and regulators to evaluate and maintain the safety and efficiency of utility facilities such as gas pipelines, electric lines, and transformers.

- **IU-7.4** Consider adopting a Community Choice Aggregation Ordinance or work with utility providers to offer renewable energy purchasing at a reduced cost to consumers.

- **IU-7.6** Continue to expand the supply of rooftop solar energy systems at public facilities and improve energy efficiency in City operations and capital improvements.

- **IU-7.7** Encourage the reduction of energy consumption through passive solar building orientation as well as the installation of rooftop solar energy systems and energy-efficient technologies.

- **IU-7.8** Continue to inform the community of rebates and other supportive programs for energy-efficient building improvements, appliances, and alternative energy systems.

## 5.8.4 Environmental Impacts

### 5.8.4.1 METHODOLOGY

This GHG evaluation was prepared in accordance with the requirements of CEQA to determine if significant GHG impacts are likely to occur in conjunction with future development that would be accommodated by the General Plan Update. The City and SOI's GHG emissions inventory includes the following sectors:

- **Transportation:** Transportation emissions forecasts were modeled using emission rates from CARB's EMFAC2017, version 1.0.2, web database. Model runs were based on daily per-capita vehicle miles traveled (VMT) data provided by Fehr & Peers (see Appendix L) and calendar year 2018 (existing) and 2040 emission rates.[8] The VMT provided includes the full trip length for land uses in the City (origin-destination approach) and a 50 percent reduction in the trip length for external-internal/internal-external trips. Consistent with CARB's methodology within the Climate Change Scoping Plan Measure Documentation Supplement, daily VMT was multiplied by 347 days per year to account for reduced traffic on weekends and holidays to determine annual emissions.

- **Energy:** Energy use for residential and nonresidential land uses in the City and SOI were modeled using natural gas data provided by SoCalGas and electricity data provided by SCE and the Corona Department of Water and Power and can be found in Appendix D. Natural gas and electricity use are based on five-year (2012–2016) averages to account for fluctuation in annual use as a result of natural variations in climate. Residential energy and non-residential energy forecasts are adjusted for increases in population and employment, respectively, in the City and SOI. The carbon intensity factor of the purchased electricity is based on SCE's reported $CO_2e$ intensity factor for year 2018 as provided in its 2018 Sustainability Report (SCE 2019). Intensity factors for $CO_2$, $CH_4$, and $N_2O$ provided in CARB's Local Governments Protocol (LGOP), version 1.1, were used for natural gas.

- **Off-Road Equipment:** Emission rates from CARB's OFFROAD2017, version 1.0.1, web database were used to estimate criteria air pollutant emissions from agricultural, light commercial, and construction in the City and SOI. OFFROAD2017 is a database of equipment use and associated emissions for each county compiled by CARB. Emissions were compiled using OFFROAD2017 for the County of Riverside for year 2018. In order to determine the percentage of emissions attributable to the City and SOI, light commercial

[8] The Year 2040 inventory represents the projected emissions that the existing land uses would generate in the future utilizing year 2040 emission factors for on-road vehicles. To isolate the impacts related to the change in land uses proposed under the proposes project, emissions related to the proposed project will be based on the difference in emissions generated by the existing and proposed land uses under year 2040 conditions. This approach is taken because existing land uses would be subject to regulations that come into effect in the future that reduce mobile-source emissions. Thus, the level of emissions the existing land uses generate today would not be generated in perpetuity, but would be affected by these state regulations.

equipment is estimated based on employment for the City of Corona as a percentage of Riverside County. Agricultural equipment emissions are based on agricultural jobs for the City as a percentage of Riverside County. Construction equipment use is estimated based on building permit data for the City of Corona and County of Riverside from data compiled by the US Census. The light commercial equipment emissions forecast is adjusted for changes in employment in the City and SOI while the agricultural equipment forecast is based on the forecasted change of farmland in the City. It is assumed that construction emissions for the forecast year would be similar to historical levels. Annual emissions are derived by multiplying daily emissions by 365 days.

- **Water/Wastewater.** GHG emissions from this sector include indirect GHG emissions from the embodied energy associated with water use and wastewater generation and fugitive GHG emissions from processing wastewater. The total annual existing and horizon year proposed project water demand and wastewater generation (gallons per year) in the City and SOI are based on average daily rates (gallons per day) estimated by Fuscoe Engineering and multiplied by 365 days. Electricity use from water use is estimated using energy rates identified by the CEC (CEC 2006b). Then energy is multiplied by the carbon intensity of energy (see Energy Use). Wastewater treatment also results in fugitive GHG emissions from wastewater processing. Fugitive emissions from wastewater treatment in the City and SOI were calculated using the emission factor's in CARB's LGOP, Version 1.1.

- **Solid Waste Disposal.** GHG emissions from solid waste disposed of by residents and employees in the City and SOI were quantified based on the waste-in-place (WIP) method. This method assumes that the degradable organic component (degradable organic carbon, DOC) in waste decays slowly throughout a few decades, during which $CH_4$ and biogenic $CO_2$ are formed. If conditions are constant, the rate of $CH_4$ production depends solely on the amount of carbon remaining in the waste. As a result, emissions of $CH_4$ from waste deposited in a disposal site are highest in the first few years after deposition, then gradually decline as the degradable carbon in the waste is consumed by the bacteria responsible for the decay. Significant $CH_4$ production typically begins one or two years after waste disposal in a landfill and continues for 10 to 60 years or longer. Waste disposal was averaged over several years to account for fluctuations in average annual solid was disposal. Waste generated was averaged over a three-year period (2015-2017), based on data obtained from CalRecycle, to provide an estimate of GHG emissions for existing conditions (baseline year). GHG emissions from solid waste disposal in the baseline year were modeled using CARB's Landfill Emissions Tool Version 1.3, which includes waste characterization data from CalRecycle. Because the landfill gas captured is not under the jurisdiction of the City of Corona, the landfill gas emissions from the capture system are not included in the inventory. Only fugitive sources of GHG emissions from landfills are included. Modeling assumes a 75 percent reduction in fugitive GHG emissions from the landfill's Landfill Gas Capture System. The Landfill gas capture efficiency is based on CARB's LGOP, Version 1.1. Emissions were adjusted to the AR5 GWP assigned for $CH_4$. Total GHG emissions from waste disposal in 2040 were forecasted based on the percent increase in service population for the City and SOI. The emissions forecast does not account for reductions from increasing waste diversion.

Industrial sources of emissions that require a permit from SCAQMD are not included in the community inventory. However, due to the 15/15 Rule, natural gas and electricity use data for industrial land uses may also be aggregated with the nonresidential land uses in the data provided by SCE and the Corona Department of

Water and Power.[9] Life-cycle emissions are not included in this analysis because not enough information is available for the proposed General Plan Update; and therefore, they would be speculative. Black carbon emissions are not included in the GHG analysis because CARB does not include this pollutant in the State's GHG emissions inventory and treats this short-lived climate pollutant separately.[10].

### 5.8.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.8-1: Implementation of the proposed General Plan Update would result in a decrease in GHG emissions in horizon year 2040 from existing baseline and is projected to meet the GHG reduction target established under SB 32, but may not meet the long-term GHG reduction goal under Executive Order S-03-05. [Threshold GHG-1]**

#### General Plan

Development under the proposed project would contribute to global climate change through direct and indirect emissions of GHG from land uses within the City and SOI. A general plan does not directly result in development without additional approvals. Before any development can occur in the city, it must be analyzed for consistency with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

##### *Horizon Year 2040 Emissions Inventory*

Buildout of the proposed project is not linked to a specific development time frame but is assumed over a 20-year project horizon. Implementation of the General Plan Update by the horizon year of 2040 would result in a net increase of 10,489 dwelling units and 26,476,352 million nonresidential square feet, resulting in an increase in 38,668 residents and 31,156 employees in the City and SOI. Development that would be accommodated by the City of Corona General Plan Update would generate a net increase of 1,308,590 daily VMT at project buildout (see Appendix L). The community GHG emissions inventory for City of Corona General Plan Update at buildout compared to existing conditions is in Table 5.8-6, *Horizon Year 2040 City and SOI GHG Emissions Forecast*. The buildout forecast includes reductions from federal and state measures identified in CARB's Scoping Plan, including the California Advanced Clean Cars program, Pavley fuel efficiency standards, LCFS for fuel use (transportation and off-road), on-road diesel fleet rules, and the Smartway/Phase I Heavy Duty Vehicle

[9] The 15/15 Rule was adopted by the California Public Utilities Commission in the Direct Access Proceeding (CPUC Decision 97-10-031) to protect customer confidentiality. The 15/15 rule requires that any aggregated information provided by a utility must be made up of at least 15 customers, and a single customer's load must be less than 15 percent of an assigned category. If the number of customers in the compiled data is below 15, or if a single customer's load is more than 15 percent of the total data, categories must be combined before the information is released. The Rule further requires that if the 15/15 Rule is triggered for a second time after the data have been screened once already using the 15/15 Rule, the customer be dropped from the information provided.

[10] Particulate matter emissions, which include black carbon, are analyzed in Section 5.3, Air Quality. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within ten years (CARB 2017a).

Greenhouse Gas Regulation, and a reduction in carbon intensity from California's renewables portfolio standard.

Table 5.8-6 Horizon Year 2040 City and SOI GHG Emissions Forecast

| Category | GHG Emissions ($MTCO_2e$/Year) | | | |
|---|---|---|---|---|
| | Existing (2018) | 2040 | Net Change | Percent Change |
| Transportation[1] | 617,849 | 419,014 | (198,835) | -32% |
| Residential Energy[2] | 226,671 | 266,135 | 39,464 | 17% |
| Non-Residential Energy[2] | 319,752 | 409,435 | 89,683 | 28% |
| Solid Waste Disposal[3] | 34,616 | 39,324 | 4,708 | 14% |
| Water/Wastewater[4] | 28,802 | 32,719 | 3,917 | 14% |
| Off-Road Equipment[5] | 19,473 | 23,287 | 3,815 | 20% |
| **Total Community Emissions** | **1,247,164** | **1,189,915** | **(57,249)** | **-4.6%** |
| SCAQMD Bright Line Threshold | — | — | 3,000 | — |
| Exceeds the Bright-Line Threshold | — | — | No | — |
| Service Population (SP)[6] | 277,948 | 348,402 | 70,454 | 25% |
| $MTCO_2e$/SP | 4.5 | 3.4 | -1.1 | -24% |

Notes: Emissions may not total to 100 percent due to rounding. Based on GWPs in the IPCC Fifth Assessment Report (AR5).

1 EMFAC2017 Version 1.0.2. Based on daily VMT provided by Fehr & Peers. Transportation sector includes the full trip length for internal-internal trips and 50 percent trip length for external-internal/internal-external trips. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

2 Electricity usage is provided by SCE and Corona Department of Water and Power. Natural gas usage data provided by SoCalGas. The carbon intensity of the purchased electricity is based on SCE 2018 reported $CO_2e$ intensity factor of 507 lbs/MWh (SCE 2019). For natural gas, the intensity factors for $CO_2$, $CH_4$, and $NO_2$ are from the LGOP, version 1.1 (CARB 2010b).

3 Landfill Emissions Tool Version 1.3 and CalRecycle. Waste generation based on waste commitment for the City of Corona obtained from CalRecycle and adjusted to account for solid waste associated with the SOI. Assumes 75 percent of fugitive GHG emissions are captured within the landfill's gas capture system. The landfill gas capture efficiency is based on CARB's Local Government Operations Protocol (LGOP), version 1.1. Significant $CH_4$ production typically begins one or two years after waste disposal in a landfill and continues for 10 to 60 years or longer. Therefore, the highest $CH_4$ emissions from waste disposal in a given year are reported.

4 LGOP, version 1.1, based on the water demand and wastewater usage provided by Fuscoe Engineering.

5 OFFROAD2017 Version 1.0.1. Light commercial equipment emissions estimated based on employment for the City of Corona as a percentage of Riverside County. Construction emissions estimated based on housing permit data for Riverside County and the City of Corona from the US Census. Agricultural emissions estimated based on agricultural jobs in the City of Corona as a percentage of Riverside County. Area sources exclude emissions from fireplaces and consumer products.

6 Existing service population consists of 165,366 residents and 70,972 employees within the City of Corona and 37,264 residents and 4,346 employees in the SOI. The 2040 projected service population consists of 184,086 residents and 84,395 employees within the City of Corona and 57,842 residents and 22,079 employees in the SOI.

As shown in Table 5.8-6, buildout of the land uses accommodated under the General Plan Update would result in a net decrease of 57,776 $MTCO_2e$ of GHG emissions (4.6 percent decrease in GHG emissions) from existing conditions and would not exceed the 3,000 $MTCO_2e$ SCAQMD bright-line screening threshold. In addition, while buildout under the proposed General Plan Update is projected to increase service population by 70,454 persons (a 25 percent increase), emissions per person would decrease compared to existing baseline. Emissions per service population would decrease to 3.4 $MTCO_2e$/SP in horizon year 2040 from 4.5 $MTCO_2e$/SP for the existing baseline year. Furthermore, as indicated in the proposed CAP (see Table 10, *Community Emissions and Targets Comparison*, of the proposed CAP), implementation of the proposed reduction strategies in addition to state and federal reductions would suffice in ensuring the City meets the established reduction target for year

2040. Therefore, implementation of the General Plan Update would result in less than significant GHG emissions impacts as it pertains to year 2040.

The primary reason for the decrease in overall community-wide GHG emissions, despite an increase in population and employment in the City and SOI, is a result of regulations adopted to reduce GHG emissions and turnover of California's on-road vehicle fleets.

Implementation of the proposed General Plan Update goals and policies could also contribute in minimizing VMT and mobile-source emissions.

- **Goal ER-12**Improvement in air quality within the Corona Planning Area by controlling point sources, reducing vehicle trips, implementing efficient land use planning and construction practices, and energy conservation. (Policies ER-12.5 through ER-12.9)

- **Goal CE-4** A public transportation system that provides mobility for residents and encourages use of public transportation as an alternative to automobile travel. (Policies CE-4.1 through CE-4.10)

- **Goal CE-5** Develop and maintain convenient bikeway and pedestrian systems to satisfy both recreational desires and transportation needs using a complete streets approach to accommodate users of all modes, abilities, and needs. (Policies CE-5.1 through CE-5.10)

For example, Policy CE-4 focuses on encouraging the development of bus rapid transit systems along major transportation corridors. Policy CE-5.4 focuses on the development of bicycle routes in accordance with the City's adopted Bicycle Master Plan. Lastly, Policy ER-12.9 would require new commercial and industrial development and redevelopment projects of sufficient scale to provide adequate bicycle facilities onsite such as bicycle racks and showers.

While energy sector emissions would increase overall under the proposed General Plan Update due to the forecast growth in population, it is anticipated that policies proposed under the General Plan Update would contribute to reducing energy sector emissions through increasing energy efficiency, energy conservation, and use of renewable energy. For example, Policy LU-6.1 focuses on promoting sustainable features in new construction and significant renovations such as use of locally sourced, recycled building materials, energy- and water-efficient building design, integrated renewable energy and energy storage systems. Policy ER-13.4 focuses on supporting the increase of clean energy supply to existing and new development in addition to municipal facilities through onsite and other local renewable energy sources. Other policies include Policy ER-13.2, which encourages the maximum feasible energy efficiency in site design, building orientation, landscaping, and utilities/infrastructure for all new development and redevelopment projects, and Policy ER-13.5, which focuses on increasing the use of clean fuel and electric vehicles through supporting the installation of electric vehicle infrastructure. Furthermore, Policy ER-13.1 calls for maintaining and updating the City's CAP to ensure ongoing and sustained reduction of GHG emissions to meet the 2020, 2030, and 2040 reduction targets. The Infrastructure Element of the General Plan Update also includes energy specific policies such as Policy IU-7.4 which calls for adoption of a Community Choice Aggregate (CCA) ordinance and Policy IU-7.6 which focuses on the continued expansion of rooftop solar energy systems at public facilities and energy efficiency

improvements in City operations.[11] Implementation of these policies, in addition to the other proposed policies of the General Plan Update would contribute in minimizing GHG emissions associated with the City and SOI to the extent feasible.

### *Consistency with SB 32 and Executive Order S-03-05 GHG Reduction Targets*

While the proposed project would not generate an increase in GHG emissions from the CEQA baseline in the 2040 horizon year forecast, this EIR also analyzes the potential for the project to conflict with the GHG reduction goals established under SB 32 and Executive Order S-03-05, which require a reduction in statewide GHG emissions from existing conditions to achieve a 40 percent reduction in GHG emissions by 2030 and an 80 percent reduction in GHG emissions by 2050, respectively.

#### *SB 32 Reduction Target*

Similar to year 2040, the proposed CAP indicates that its implementation would result in the City meeting the established GHG reduction target for year 2030. Based on the overall statewide reduction target set under SB 32, the proposed CAP set a year 2030 reduction target of 890,378 $MTCO_2e$ (49 percent below 2008 levels) for the City. Per the proposed CAP, with implementation of the local reduction strategies in addition to state and federal reductions, the City's community-wide inventory projected for year 2030 is 566,275 $MTCO_2e$, which would meet the established year 2030 target (see Table 10, *Community Emissions and Targets Comparison*, of the proposed CAP). Therefore, implementation of the proposed General Plan Update in conjunction with the proposed CAP would result in less than significant GHG emissions impacts as it pertains to meeting the interim year 2030 reduction target.

#### *Executive Order S-03-05 GHG Reduction Targets*

As shown in Table 5.8-6 and as discussed, it is anticipated that implementation of the proposed General Plan Update would result in an overall net decrease in emissions in horizon year 2040 compared to existing baseline and is also projected to meet the year 2040 GHG emissions reduction target set in the proposed CAP. Furthermore, it is also anticipated that the City would meet the year 2030 GHG emissions reduction target even under the growth scenario associated with the proposed General Plan Update. Meeting the 2030 and 2040 reduction targets can be used as indicators in gauging whether the City would progress in meeting the long-term year 2050 reduction goal of Executive Order S-03-05. However, while it is projected that buildout of the proposed General Plan Update in conjunction with implementation of the proposed CAP would result in the City meeting its 2030 and 2040 reduction targets, the proposed CAP does not include any reduction strategies to meet the long-term 2050 reduction goal. Reduction strategies to meet the long-term 2050 GHG reduction goal in addition to establishment of a 2050 reduction target would be included in the planned future updates to the CAP. Therefore, until such time, GHG emissions impacts for the proposed General Plan Update are considered potentially significant in regard to meeting the long-term year 2050 reduction goal.

[11] A CCA would allow energy users within the City and SOI an alternative option to SCE and to use more renewable energy.

## Climate Action Plan

The proposed CAP is included as Appendix C to this DEIR. The proposed CAP is a policy document that focuses on strategies to reduce community-wide GHG emissions associated with the City. Additionally, its implementation would not result in changes to the land use plan. Thus, because there is no specific land use component associated with the proposed CAP, its implementation would not directly result in the generation of GHG emissions. The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan Update and would help reduce GHG emissions generated by existing and proposed land uses in the City and SOI. Transportation measures that reduce VMT (e.g., Measures 7.1 and 7.2) would result in reduction in criteria air pollutants from the transportation sector. Likewise, energy efficiency improvements (e.g., Measures 1.2, 2.1, 4.1) would reduce the heating and cooling requirements for buildings. These measures for increasing energy efficiency, increasing water efficiency (Measures 5.1 and 5.2), and reducing energy demand (Measures 6.1 and 6.2) would contribute to minimizing energy demand and energy sector emissions. Furthermore, the proposed CAP also includes joining a CCA program (Measure 9.2). There, implementation of the proposed CAP would result in beneficial impacts to GHG.

**Impact 5.8-2: The proposed project would not conflict with the plans adopted for the purpose of reducing GHG emissions. [Threshold GHG-2]**

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and SCAG's 2016-2040 RTP/SCS. A consistency analysis with these plans is presented below.

## General Plan

### *CARB Scoping Plan*

The CARB Scoping Plan is applicable to state agencies, but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require the City to adopt policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the state agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that would affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the LCFS and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars program).

Project GHG emissions shown in Table 5.8-6, include reductions associated with statewide strategies that have been adopted since AB 32. Development projects accommodated under the General Plan Update are required to adhere to the programs and regulations identified by the Scoping Plan and implemented by state, regional, and local agencies to achieve the statewide GHG reduction goals of AB 32. Future development projects would be required to comply with these state GHG emissions reduction measures as they are statewide strategies. For example, new buildings associated with land uses accommodated under the proposed land use plan of the General Plan Update would be built to meet the CALGreen and Building Energy Efficiency Standards in effect at the time when applying for building permits. Furthermore, as discussed under Impact GHG-1, the General

Plan Update include policies that would help reduce GHG emissions and therefore, help achieve GHG reduction goals. Therefore, overall, the General Plan Update would not obstruct implementation of the CARB Scoping Plan.

### *SCAG's 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*

The SCAG RTP/SCS is Southern California's regional transportation plan to achieve the passenger vehicle emissions reductions identified under SB 375. SCAG's 2016-2040 RTP/SCS was adopted April 7, 2016. The RTP/SCS identifies multimodal transportation investments, including bus rapid transit, light rail transit, heavy rail transit, commuter rail, high-speed rail, active transportation strategies (e.g., bike ways and sidewalks), transportation demand management strategies, transportation systems management, highway improvements (interchange improvements, high-occupancy vehicle lanes, high-occupancy toll lanes), arterial improvements, goods movement strategies, aviation and airport ground access improvements, and operations and maintenance to the existing multimodal transportation system.

SCAG's RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in the 2016-2040 RTP/SCS is to allow the southern California region to grow in more compact communities in existing urban areas; provide neighborhoods with efficient and plentiful public transit and abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands (SCAG 2016). The 2016-2040 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth as well as a forecast development that is generally consistent with regional-level general plan data. The projected regional development pattern—when integrated with the proposed regional transportation network identified in the RTP/SCS—would reduce per capita vehicular-travel-related GHG emissions and achieve the GHG reduction per capita targets for the SCAG region. The RTP/SCS does not require that local general plans, specific plans, or zoning be consistent with the RTP/SCS, but provides incentives for consistency for governments and developers.

Table 5.8-7, *General Plan Update Consistency with SCAG's 2016-2040 RTP/SCS Transportation-Land Use Strategies*, provides an evaluation of the proposed project in comparison to the three primary transportation-land-use strategies in the 2016-2040 RTP/SCS. As shown in the table, the General Plan Update would be consistent with the applicable strategies. Additionally, as demonstrated in Table 5.11-1, *SCAG's 2016–2040 RTP/SCS Consistency Analysis*, of Section 5.11, *Land Use and Planning*, the General Plan Update would be consistent with the 2016-2040 RTP/SCS goals. Furthermore, as discussed in Impact 5.14-1 of this DEIR, implementation of the proposed project would improve and maintain the jobs-housing balance in the SOI and City, respectively. Thus, the General Plan Update would provide residents in the City and SOI to both live and work in the City and SOI instead of commuting to other areas, which would contribute in minimizing VMT. Therefore, the General Plan Update would not interfere with SCAG's ability to implement the regional strategies outlined in the 2016-2040 RTP/SCS and no impact would occur.

Table 5.8-7 General Plan Update Consistency with SCAG's 2016-2040 RTP/SCS Transportation-Land Use Strategies

| SCAG Transportation-Land Use Strategies | Implementing Policies/Strategies | Consistency |
|---|---|---|
| Focus new growth around high quality transit areas (HQTA). The 2016 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region's HQTAs. The 2016 RTP/SCS assumes that 46 percent of new housing and 55 percent of new employment locations developed between 2012 and 2040 will be in HQTAs, which comprise only 3 percent of the total land area in the SCAG region (SCAG 2016). | Additional local policies that ensure that development in HQTAs achieve the intended reductions in VMT and GHG emissions include:<br>• Affordable housing requirements.<br>• Reduced parking requirements.<br>• Adaptive reuse of existing structures.<br>• Density bonuses tied to family housing units such as three- and four-bedroom units.<br>• Mixed-use development standards that include local serving retail.<br>• Increased Complete Streets investments around HQTAs. | Consistent: There are identified HQTAs that general trend east to west and that extend 0.5 mile north and south of Sixth Street in the City. The proposed land use diagram includes designated medium to high and urban density residential areas in addition to mixed-use designated areas within the HQTAs. Additionally, the General Plan Update includes Goal H-1 and its supporting policies, which focus on promoting and maintaining a balance of housing types that would provide housing for residents within all economic segments. The General Plan Update also includes Policy HU-4.4 that supports promoting the adaptive reuse and infill of economically underutilized commercial and industrial sites within existing urbanized areas. Furthermore, the General Plan Update also includes various complete street goals and policies such as Goal CE-5 and Policy CE-1.1. |
| Plan for growth around livable corridors. SCAG's livable-corridors strategy seeks to revitalize commercial strips through integrated transportation and land use planning that results in increased economic activity and improved mobility options. | Additional livable corridors strategies include:<br>• Transit improvements, including dedicated lane bus rapid transit (BRT) or semidedicated BRT-light. The remaining corridors have the potential to support other features that improve bus performance (enhanced bus shelters, real-time travel information, off-bus ticketing, all door boarding, and longer distances between stops to improve speed and reliability).<br>• Active transportation improvements: Livable corridors include increased investments in complete streets to make these corridors and the intersecting arterials safe for biking and walking.<br>• Land use policies: Livable corridor strategies include the development of mixed-use retail centers at key nodes along the corridors, increasing neighborhood-oriented retail at more intersections, and zoning that allows for the replacement of underperforming auto-oriented strip retail between nodes with higher density residential and employment. | Consistent: The identified 3,000 miles of livable corridors are generally a subset of HQTAs, except for 154 miles that have been identified in sustainability planning grant projects. The General Plan Update includes Goal CE-4 which focuses on supporting a public transportation system that provides mobility for residents and encourages use of public transportation as an alternative to automobile use. The policies include under this goal cover improvements to public transit facilities (e.g., bus shelters) and encouraging the development of a bus rapid transit system. Furthermore, the Circulation Element also includes Goal CE-5 which focuses on developing and maintaining pedestrian and bicycle infrastructure improvements. As stated above, the General Plan Update also includes goals and policies related to implementing complete street designs. Additionally, the proposed land use diagram includes designated medium to high and urban density residential |

Table 5.8-7 General Plan Update Consistency with SCAG's 2016-2040 RTP/SCS Transportation-Land Use Strategies

| SCAG Transportation-Land Use Strategies | Implementing Policies/Strategies | Consistency |
|---|---|---|
| | | areas in addition to mixed-use designated areas within the HQTAs. |
| Provide more options for short trips in neighborhood mobility areas and complete communities. Neighborhood mobility areas have a high intersection density, low to moderate traffic speeds, and robust residential retail connections. These areas are suburban in nature, but can support slightly higher density in targeted locations. The land use strategies include shifting retail growth from large centralized retail strip malls to smaller distributed centers throughout a neighborhood mobility area. | Neighborhood mobility area land use strategies include pursuing local policies that encourage replacing motor vehicle use with neighborhood electric vehicle (NEV) use. NEVs are a federally designated class of passenger vehicle rated for use on roads with posted speed limits of 35 miles per hour or less. Steps needed to support NEV use include providing state and regional incentives for purchases, local planning for charging stations, designating a local network of low speed roadways, and adopting local regulations that allow smaller NEV parking stalls.<br><br>Complete communities strategies include creation of mixed-use districts through a concentration of activities with housing, employment, and a mix of retail and services in close proximity to each other. Focusing a mix of land uses in strategic growth areas creates complete communities wherein most daily needs can be met within a short distance of home, providing residents with the opportunity to patronize their local area and run daily errands by walking or cycling rather than traveling by automobile. | Consistent: As stated above, the General Plan Update designates mixed-use areas in the City and SOI, which would accommodate the development of a variety of uses in proximity to each other. The General Plan Update includes policies and goals that promote active transit and public transit improvements, which would provide greater bicycle, pedestrian, and public transportation connectivity to amenities in local neighborhoods within the City and SOI. |

Source: SCAG 2016.

### Climate Action Plan

The proposed CAP would not result in additional changes to and would not affect the development density or intensity allowed by the proposed land use plan of the General Plan Update. Furthermore, as discussed under Impact 5.8-1, its implementation would result in beneficial GHG emissions impacts by contributing to reducing VMT, increasing energy and water use efficiency, and increasing renewable energy use. Therefore, the proposed CAP would be complementary of statewide and regional plans to reduce GHG and would not interfere with or obstruct the implementation of the Scoping Plan or the 2016-2040 RTP/SCS, and no impact would occur.

## 5.8.5 Existing Regulations and Standard Conditions

### State

- California Global Warming Solutions Act (AB 32)
- California Global Warming Solutions Act of 2006: Emissions Limit (SB 32)
- Sustainable Communities and Climate Protection Act (SB 375)
- Greenhouse Gas Emission Reduction Targets (Executive Order S-03-05)

- Clean Car Standards – Pavley (AB 1493)
- Renewables Portfolio Standards (SB 1078)
- California Integrated Waste Management Act of 1989 (AB 939)
- California Mandatory Commercial Recycling Law (AB 341)
- California Advanced Clean Cars CARB (Title 13 CCR)
- Low-Emission Vehicle Program – LEV III (Title 13 CCR)
- Heavy-Duty Vehicle Greenhouse Gas Emissions Reduction Measure (Title 17 CCR)
- Low Carbon Fuel Standard (Title 17 CCR)
- California Water Conservation in Landscaping Act of 2006 (AB 1881)
- California Water Conservation Act of 2009 (SBX7-7)
- Statewide Retail Provider Emissions Performance Standards (SB 1368).
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

## 5.8.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.8-2.

Without mitigation, the following impact would be **potentially significant**:

- **Impact 5.8-1** Implementation of the proposed General Plan Update would result in a decrease in GHG emissions in horizon year 2040 from existing baseline and is projected to meet the GHG reduction target established under SB 32, but may not meet the long-term GHG reduction goal under Executive Order S-03-05.

## 5.8.7 Mitigation Measures

### Impact 5.8-1

GHG-1 The City of Corona shall update the Climate Action Plan (CAP) every five years to ensure the City is monitoring the plan's progress toward achieving the City's greenhouse gas (GHG) reduction target and to require amendment if the plan is not achieving specified level. The update shall consider a trajectory consistent with the GHG emissions reduction goal established under Executive Order S-03-05 for year 2050 and the latest applicable statewide legislative GHG emission reduction that may be in effect at the time of the CAP update (e.g., Senate Bill 32 for year 2030). The CAP update shall include the following:

- GHG inventories of existing and forecast year GHG levels.
- Tools and strategies for reducing GHG emissions to ensure a trajectory with the long-term GHG reduction goal of Executive Order S-03-05.
- Plan implementation guidance that includes, at minimum, the following components consistent with the proposed CAP:
  - Administration and Staffing
  - Finance and Budgeting
  - Timelines for Measure Implementation
  - Community Outreach and Education
  - Monitoring, Reporting, and Adaptive Management
  - Tracking Tools

## 5.8.8 Level of Significance After Mitigation

### Impact 5.8-1

Implementation of Mitigation Measure GHG-1 would ensure that the City is tracking and monitoring the City's GHG emissions in order to chart a trajectory to achieve the long-term year 2050 GHG reduction goal set by Executive Order S-03-05. However, at this time, there is no plan past 2030 that achieves the long-term GHG reduction goal established under Executive Order S-03-05. As identified by the California Council on Science and Technology, the state cannot meet the 2050 goal without major advancements in technology (CCST 2012). Advancement in technology in the future could provide additional reductions to allow the state and City to meet the 2050 goal; however, no additional statewide measures are currently available. Therefore, Impact 5.8-1 would be **significant and unavoidable**.

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# 5.9 HAZARDS AND HAZARDOUS MATERIALS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts from implementation of the Corona General Plan Update on human health and the environment due to exposure to hazardous materials or conditions associated with the project site, project construction, and project operations in the City of Corona and its Sphere of Influence (SOI). Cumulative impacts related to hazards and hazardous materials would be contiguous with the City and SOI boundary. Potential project impacts and appropriate mitigation measures or standard conditions are included as necessary. The analysis in this section is based in a review of Hazardous Materials Sites, which is included as Appendix H to this DEIR.

## 5.9.1 Environmental Setting

### 5.9.1.1 REGULATORY FRAMEWORK

The following laws, regulations, and policies govern hazardous materials in the City of Corona and its Sphere of Influence.

#### Federal Laws

##### *Hazardous Materials*

***Comprehensive Environmental Response, Compensation and Liability Act***

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) is a law developed to protect the water, air, and soil resources from the risks created by past chemical-disposal practices. This law is also referred to as the Superfund Act and regulates sites on the National Priority List (NPL), which are called Superfund sites.

***Emergency Planning and Community Right-To-Know Act***

In 1986, Congress passed the Superfund Amendments and Reauthorization Act. Title III of this regulation may be cited as the "Emergency Planning and community Right-to-Know Act of 1986" (EPCRA). The Act required the establishment of state commissions, planning districts, and local committees to facilitate the preparation and implementation of emergency plan. Under the requirements, local emergency planning committees are responsible for developing a plan for preparing for and responding to a chemical emergency, including:

- An identification of local facilities and transportation routes where hazardous materials are present.
- The procedures for immediate response in case of an accident (this must include a community-wide evacuation plan).
- A plan for notifying the community that an incident has occurred.
- The names of response coordinators at local facilities.

- A plan for conducting drills to test the plan.

The emergency plan is reviewed by the State Emergency Response Commission and publicized throughout the community. The local emergency planning committee is required to review, test, and update the plan each year. The Riverside County Department of Environmental Health is responsible for coordinating hazardous material and disaster preparedness planning and appropriate response efforts with city departments and local and state agencies. The goal is to improve public- and private-sector readiness and to mitigate local impacts resulting from natural or man-made emergencies.

Another purpose of the EPCRA is to inform communities and citizens of chemical hazards in their areas. Sections 311 and 312 of EPCRA require businesses to report to state and local agencies the location and quantities of chemicals stored onsite. Under section 313 of EPCRA, manufacturers are required to report chemical releases for more than 600 designated chemicals. In addition to chemical releases, regulated facilities are also required to report offsite transfers of waste for treatment or disposal at separate facilities, pollution prevention measures, and chemical recycling activities. The US Environmental Protection Agency (EPA) maintains the Toxic Release Inventory database that documents the information that regulated facilities are required to report annually.

#### *Resource Conservation and Recovery Act*

The Resource Conservation and Recovery Act (RCRA) is the principal federal law that regulates generation, management, and transportation of hazardous waste. Hazardous waste management includes the treatment, storage, or disposal of hazardous waste.

## State Laws

### *Hazardous Materials*

#### *Hazardous Materials Release Notification*

Many state statutes require emergency notification of a hazardous chemical release:

- California Health and Safety Codes Sections 25270.8, and 25507
- Vehicle Code Section 23112.5
- Public Utilities Code Section 7673, (PUC General Orders #22-B, 161)
- Government Code Sections 51018, 8670.25.5 (a)
- Water Codes Sections 13271, 13272,
- California Labor Code Section 6409.1 (b)10

Requirements for immediate notification of all significant spills or threatened releases cover owners, operators, persons in charge, and employers. Notification is required regarding significant releases from facilities, vehicles,

vessels, pipelines, and railroads. In addition, all releases that result in injuries or harmful exposure to workers must be immediately reported to the California Occupational Safety and Health Administration pursuant to the California Labor Code Section 6409.1(b).

### *Hazardous Materials Disclosure Programs*

The Unified Program administered by the State of California consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities for environmental and emergency management programs, which include: Hazardous Materials Release Response Plans and Inventories (business plans), the California Accidental Release Prevention (CalARP) Program, and the Underground Storage Tank (UST) Program. The Unified Program is implemented at the local government level by Certified Unified Program Agencies (CUPAs).

The CUPA for the City of Corona is the Riverside County Department of Environmental Health (DEH), which is responsible for regulating hazardous waste and tiered permitting; underground storage tanks; aboveground storage tanks; and risk management plans.

The Corona Fire Department (CFD) is a Participating Agency under the Certified Unified Program, and administers Hazardous Materials Release Response Plan and Inventory Program and Hazardous Materials Management Plans and Inventory and permits for handling underground storage and storage of hazardous materials pursuant to the Corona Fire Code.

### *Hazardous Materials Business Plans*

Both the federal government (Code of Federal Regulations) and the State of California (California Health and Safety Code) require all businesses that handle more than a specified amount—or "reporting quantity"—of hazardous or extremely hazardous materials to submit a hazardous materials business plan to the CFD. According to City guidelines, the preparation, submittal, and implementation of a business plan is required by any business that handles a hazardous material or a mixture containing a hazardous material in specified quantities.

Business plans must include an inventory of the hazardous materials at the facility. Businesses must update their business plan and the chemical portion annually. Also, business plans must include emergency response plans and procedures to be used in the event of a significant or threatened significant release of a hazardous material. These plans need to identify the procedures for immediate notification of all appropriate agencies and personnel, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information for all company emergency coordinators, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel.

### *California Accidental Release Prevention Program*

CalARP became effective on January 1, 1997, in response to Senate Bill 1889. CalARP aims to be proactive and therefore requires businesses to prepare risk management plans, which are detailed engineering analyses of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce

this accident potential. This requirement is coupled with the requirements for preparation of hazardous materials business plans under the Unified Program, implemented by the CUPA.

#### *Leaking Underground Storage Tanks*

Leaking USTs have been recognized since the early 1980s as the primary cause of groundwater contamination from gasoline compounds and solvents. In California, regulations aimed at protecting against UST leaks have been in place since 1983 (Health and Safety Code). This occurred one year before RCRA was amended to add Subtitle I, requiring UST systems to be installed in accordance with standards that address the prevention of future leaks. The State Water Resources Control Board has been designated the lead California regulatory agency in the development of UST regulations and policy.

Older tanks are typically single-walled steel tanks. Many of these have leaked as a result of corrosion, punctures, and detached fittings. As a result, the State of California required the replacement of older tanks with new double-walled fiberglass tanks with flexible connections and monitoring systems. UST owners were given 10 years to comply with the new requirements—deadline was December 22, 1998. However, many UST owners did not act by the deadline, so the state granted an extension for their replacement ending January 1, 2002. The California Regional Water Quality Control Boards, in cooperation with the Office of Emergency Services, maintain an inventory of leaking USTs in a statewide database.

#### *California Code of Regulations, Title 22, Division 4.5*

Title 22, Division 4.5, of the California Code of Regulations (CCR) sets forth the requirements for hazardous-waste generators; transporters; and owners or operators of treatment, storage, or disposal facilities. These regulations include the requirements for packaging, storage, labeling, reporting, and general management of hazardous waste prior to shipment. In addition, the regulations identify standards applicable to transporters of hazardous waste. These regulations specify the requirements for transporting shipments of hazardous waste, including manifesting, vehicle registration, and emergency accidental discharges during transportation.

### *Airport-Related Hazards*

#### *State Aeronautics Act*

The State Aeronautics Act (Public Utilities Code §§ 21001 et seq.) is implemented by Caltrans's Division of Aeronautics. Key purposes of the act include to: 1) foster and promote safety in aeronautics; 2) ensure that state laws and regulations relating to aeronautics are consistent with federal aeronautics laws and regulations; and 3) ensure that persons residing within the vicinity of airports are protected against intrusions by unreasonable levels of aircraft noise. The Division of Aeronautics issues permits for and annually inspects hospital heliports and public-use airports, makes recommendations regarding proposed school sites within two miles of an airport runway, and authorizes helicopter landing sites at/near schools.

The State Aeronautics Act also establishes statewide requirements for airport land use compatibility plans (ALUCP). These plans are intended to provide for the orderly growth of a public airport and the area surrounding the airport while safeguarding the general welfare of inhabitants near the airport and the public in general. Caltrans's *California Airport Land Use Planning Handbook* provides guidelines for preparing ALUCPs that

establish policies applicable to a range of issues, including the influence areas of airports, aircraft noise standards and criteria, accident potential zones, and building height zones near airports. The Riverside Airport Land Use Commission (ALUC) is responsible for implementing this legislation.

### Fire Hazards

#### *California Fire Code*

The California Fire Code (CCR Title 24 Part 9) sets forth requirements including those for building materials and methods pertaining to fire safety and life safety, fire protection systems in buildings, emergency access to buildings, and handling and storage of hazardous materials. The city adopts the update to the CFC every three years.

#### *California Building Code*

The California Building Code requires the installation and maintenance of smoke alarms in residential dwelling units:

- **CCR Title 24, Part 2, Section 907.2.11.2.** Smoke alarms shall be installed and maintained on the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms. In each room used for sleeping purposes, and in each story within a dwelling unit. The smoke alarms shall be interconnected.

### Evacuation Routes

Government Code Section 65302 requires the Safety Element of a General Plan to address evacuation routes. The California Department of Forestry and Fire Protection (CAL FIRE) Safety Element checklist also requires cities to address evacuation routes. In addition, Senate Bill 99 (2018) requires a Safety Element, upon the next revision of the housing element on or after January 1, 2020, to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes.

## Regional Laws

### Hazardous Materials

#### *South Coast Air Quality Management District*

SCAQMD Rule 1403 governs the demolition of buildings containing asbestos materials. Rule 1403 specifies work practices with the goal of minimizing asbestos emissions during building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing material (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and cleanup procedures, and storage and disposal requirements for asbestos-containing waste materials.

#### *Riverside County Department of Environmental Health*

In the SOI, the DEH is responsible for all components of the CUPA program described above, including Hazardous Materials Business Plans and hazardous materials inventories, for which CFD is responsible within the City of Corona.

#### *Hazardous Waste Transporters and Disposal Facilities*

The DEH list of hazardous waste transporters includes six in western Riverside County, including three in Corona (DEH 2015). No landfills in Riverside County accept hazardous waste; one landfill in surrounding counties, the Cleanharbors Westmoreland Landfill Facility near the City of Westmoreland in Imperial County, accepts such wastes (SWRCB 2016).

Two facilities in western Riverside County—one in the City of Corona and one in the City of Riverside—are listed by DEH as accepting universal wastes which include televisions, computers, and other electronic devices as well as batteries, fluorescent lamps, mercury thermostats, and other mercury-containing equipment (DEH 2014).

### *Fire Hazards*

#### *CAL FIRE, County of Riverside Unit Strategic Plan*

The California Strategic Plan is implemented through individual "unit plans" that are prepared for different regions of the state. CAL FIRE has adopted a Riverside Unit Fire Plan that covers Riverside County and the agency's priorities for prevention, protection, and suppression of wildfires. The overall goal of the Riverside County Unit Fire Plan is to reduce total costs and losses from wildland fire in the unit by protecting assets at risk through focused prefire management prescriptions and increasing initial attack success.

## Local Laws

### *Hazardous Materials*

#### *City of Corona Local Hazard Mitigation Plan*

The City of Corona has prepared a Local Hazard Mitigation Plan (LHMP) to identify the City's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences, and set goals to reduce or eliminate long-term risk to people and property from natural and man-made hazards. Wildfire hazard is rated the second highest risk of the 23 hazards evaluated, after earthquakes. The LHMP contains a series of goals and mitigation programs to address each of the hazards.

#### *City of Corona Emergency Operations Plan*

The City of Corona has prepared an Emergency Operations Plan (EOP) to address the City's planned response to natural disasters, technological incidents, and national security emergencies. The EOP does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with such

emergencies. The EOP's operational concepts focus on potential large-scale disasters that can generate unique situations requiring unusual emergency responses. The EOP's emergency management goals are:

1. Provide effective life safety measures and reduce property losses.
2. Provide for the rapid resumption of impacted businesses and community services.
3. Provide accurate documentation and records required for cost recovery efforts.

## Airport-Related Hazards

### *Airport Master Plan*

An airport master plan contains a comprehensive land use plan that will provide for the orderly growth of an airport and the area surrounding the airport and will safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general (Public Utilities Code § 21675). Corona Municipal Airport operations are governed by an airport master plan, which was first adopted by the City in 1978 and subsequently amended in 1990. The airport master plan meets the requirements of Public Utilities Code Section 21675. The airport presently accommodates about 50,000 annual operations, with a forecast maximum of 100,000 operations annually, although future growth is unlikely due to environmental constraints at the airport.

## Fire Hazards

### *Corona Standards of Coverage Study and Fire Strategic Plan*

The Corona Fire Department sets the vision, mission, business operations and guiding principles for the department by means of a strategic plan. The purpose of the strategic plan is so that the members of the organization can envision its future and develop the necessary procedures and operations to achieve that future. The strategic plan is a foundational plan that assists the department in preparing annual fiscal year budgets, master plans, and other related activities it is required to perform. Although the planning period is eight years, it is updated annually to assess service levels, performance, and other needed functions that may change during the course of a year.

### *Corona Municipal Code*

- **Chapter 2.52, Emergency Management Organization,** provides for the preparation and carrying out of plans to protect people and property within the City of Corona during an emergency or disaster event.
  - **Section 2.52.060** establishes a Disaster Council in the event there is an emergency or disaster event in the City. The Disaster Council include the Fire Chief, who shall be the Council Chair, and member of the Riverside County Disaster Council, unless otherwise stated by the City Manager, and the Disaster Council shall include the Fire Department Emergency Services Director.
  - **Section 2.52.090** indicates that the Fire Chief shall be the Emergency Services Director and shall appoint an Emergency Services Coordinator.

- **Section 2.52.120** established the Corona Fire Department Office of Emergency Services, which consists of positions that may be established by the City Council by resolution. The Corona Fire Department are assigned the office and its responsibilities.

- **Section 2.52.130** establishes the position of Emergency Services Coordinator, which the Fire Chief shall appoint. The Emergency Services Coordinator, and associated duties, is assigned to the Fire Department, and the person serving that position is assigned to the Emergency Services Director.

- **Chapter 15.16, Fire Hazard Severity Zones,** outlines the authority of the Fire Chief in determining Very High Fire Hazard Severity Zones (VHFHSZ) and creating a VHFHSZ map.

  - In **Section 15.16.010**, the City Council delegates authority to its Fire Chief to designate within the City VHFHSZs as required by California Government Code Section 51175 et seq. and other applicable state and federal laws, rules, and regulations. The Fire Chief has the authority to make any future revisions to the VHFHSZ in accordance with state and federal laws, rules, and regulations.

  - In **Section 15.16.020**, the Fire Chief shall prepare and maintain a map titled the "City of Corona Very High Fire Hazard Severity Zones in LRA" ("VHFHSZ Map") to show the VHFHSZ within the City. The Fire Chief has the authority to make any future revisions to the VHFHSZ Map in accordance with state and federal laws, rules, and regulations.

  - In **Section 15.16.040**, the VHFHSZ Map is intended to be used in conjunction with the most current edition of the California Building Code, and supersedes any other maps previously adopted by the City designating high fire hazard areas. The Building Official shall be responsible for enforcing provisions of the code and other applicable law which may be applicable to property identified on the VHFHSZ Map within the City, pursuant to Section 3202, Title 24 of the California Code of Regulations and other applicable state and federal laws, rules, and regulations.

### 5.9.1.2 EXISTING CONDITIONS

#### Hazardous Materials

Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that a business or implementing agency has a reasonable basis for believing would be injurious to public health and safety or harmful to the environment if released into the workplace or the environment.

##### *Hazardous Waste Generators*

Corona has more than 300 licensed commercial and industrial businesses and uses that generate some form of hazardous materials or waste. The EPA regulates generators of hazardous waste based on the amount of waste generated. Large quantity generators produce 1,000 kilograms or more per month, or more than one kilogram per month of acutely hazardous waste. Small quantity generators produce between 100 and 1,000 kilograms of hazardous waste per month.

### *Hazardous Materials Sites*

A database search found hazardous materials cleanup sites in Corona on four databases—the EPA's Superfund Enterprise Management System (SEMS) and Brownfields databases; the Department of Toxic Substances Control's EnviroStor database; and the State Water Resources Control Board's GeoTracker database (see Table 5.9-1). Only open EnviroStor and GeoTracker cases are listed in Table 5.9-1 and mapped on Figure 5.9-1, *Hazardous Materials Cleanup Sites in Corona (Open Cases)*. Complete listings, including closed cases, are in Appendix H, *Hazardous Materials Site List*, of this DEIR. Brownfield sites are properties for which use or reuse is constrained by the presence or potential presence of hazardous materials.

Table 5.9-1 Hazardous Materials Sites in City and SOI

| Site Name<br>Address | Reason for Listing and Regulatory Status |
|---|---|
| **Superfund Enterprise Management System (SEMS), US Environmental Protection Agency** | |
| 6th and Corona<br>Near the intersection of Cardiff St/6th St | Removal only site (no site assessment work needed) |
| Advanced Fuel Filtration, Inc<br>1451 Magnolia | Removal only site (no site assessment work needed) |
| Liston Brick Co.<br>3710 Temescal Canyon Rd | Removal only site (no site assessment work needed)<br>Listed as case closed 2016 on DTSC *Envirostor* database. |
| Sherborn Magnolia Drum Site<br>Near Sherborn St/Magnolia St | Also listed as USEPA City of Corona Brownfields site.<br>Removal only site (no site assessment work needed)<br>Site assessment completed 2007 |
| Thomas Ranch | Also listed as State Voluntary Cleanup Site, case closed 2014, on DTSC *EnviroStor* database. |
| **Brownfield Sites, US Environmental Protection Agency** | |
| Harrington<br>1096 Harrington Street | Site assessment completed 2010 |
| Corona Redevelopment Agency<br>1040 E 6th St | Site assessment underway |
| Corona Redevelopment Agency<br>Main at Ramona | Site assessment completed 2010 |
| City of Corona<br>1601 Sherborn Rd | Site assessment completed 2007 |
| **GeoTracker Database, State Water Resources Control Board** | |
| **Leaking Underground Storage Tank (LUST): Open Cases** | |
| Downs Energy<br>1296 Magnolia Avenue<br>Corona | Gasoline release affected soil<br>Site assessment and interim remedial action 2016 |
| Private residence<br>Near the intersection of<br>Ramona Avenue/6th Street, Corona | Diesel release affected soil<br>Remediation 2001 |
| Arco # 1924<br>785 N Main St, Corona | Gasoline release affected drinking water aquifer<br>Eligible for closure 2016 |
| **Cleanup Program Sites: Open Cases** | |
| Dry Clean Express<br>341 S Lincoln Ave<br>Corona | Release of tetrachloroethylene (PCE), trichloroethylene (TCE) affected soil<br>Site assessment 2010 |

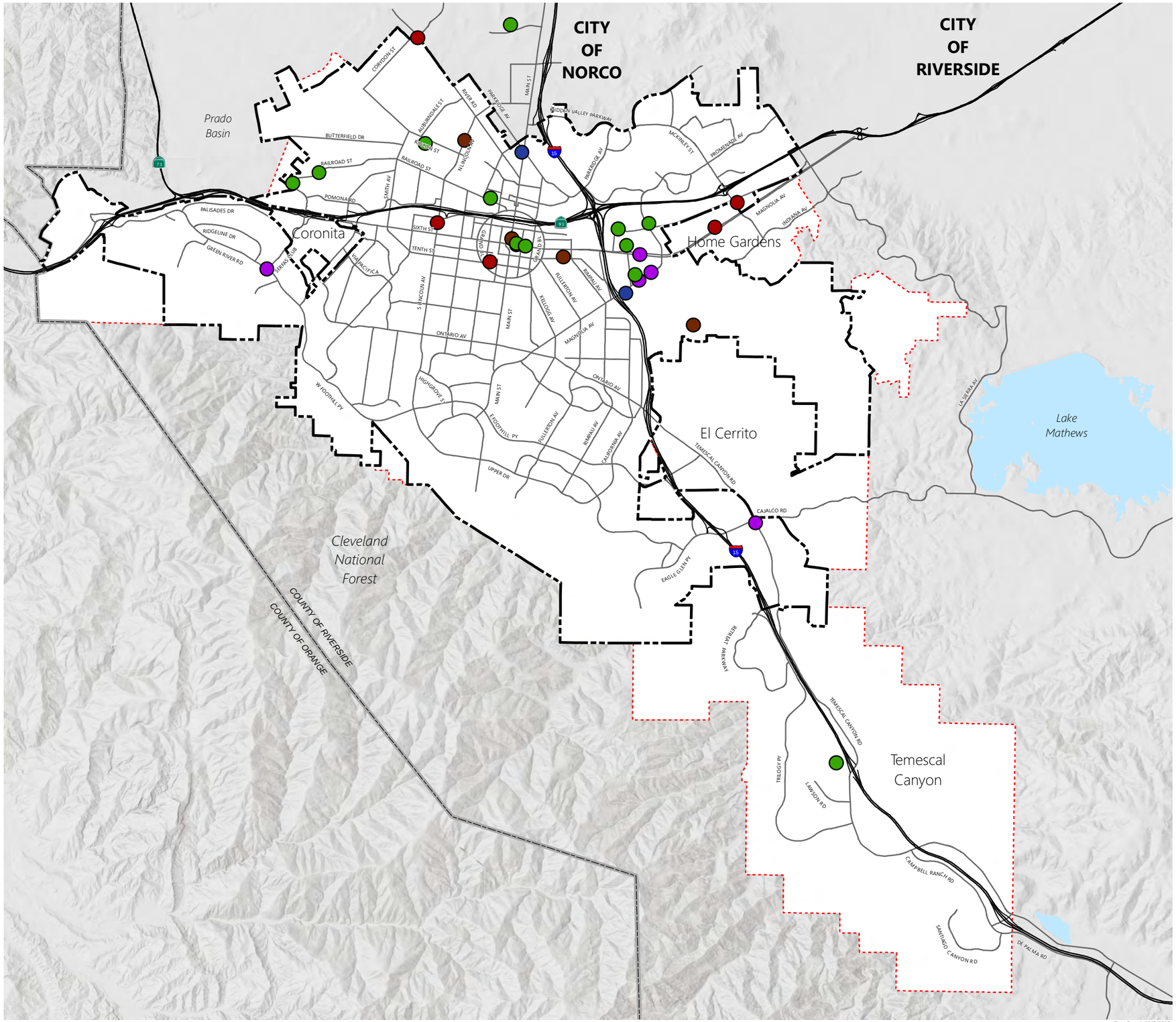
Table 5.9-1 Hazardous Materials Sites in City and SOI

| Site Name<br>Address | Reason for Listing and Regulatory Status |
|---|---|
| Planet Home Living<br>13485 Magnolia Avenue<br>Corona | Contaminants and media affected not specified<br>Site assessment and interim remedial action 2017 |
| Park Avenue Cleaners<br>129 McKinley St<br>Corona | Contaminants of concern tetrachloroethylene (PCE), trichloroethylene (TCE)<br>Media of concern indoor air, groundwater other than drinking water, soil, soil vapor<br>Verification monitoring 2017 |
| Corona Mfg Co<br>Near the intersection of Corydon Ave/River Rd<br>Corona | Contaminants and media affected not specified |
| Thomas Ranch | Potential contaminants other acid or corrosive, benzene, xylene, other petroleum. Potential media affected groundwater other than drinking water; soil. Site assessment 1986. |
| EnviroStor Database, Department of Toxic Substances Control | |
| Cleanup Sites: Open Cases | |
| Edison/Corona #1 MGP<br>633 Railroad St<br>Corona | Arsenic and polynuclear aromatic hydrocarbons affected soil<br>Case active |
| Tamarack Scientific Co., Inc.<br>220 Klug Circle | Contaminants and media affected not specified<br>Inactive, needs evaluation |
| Aluminum & Magnesium Inc.<br>1300 W. Sampson | Contaminants and media affected not specified<br>Inactive; needs evaluation 2008 |
| Clow Valve Company<br>1375 Magnolia Avenue | Contaminants and media affected not specified<br>Active 2016 |
| Frontier Aluminum, Inc.<br>2480 Railroad Street | Contaminants and media affected not specified<br>Inactive; needs evaluation |
| U.S. Battery Mfg. Co.<br>1675 Sampson Avenue | Contaminants and media affected not specified<br>Inactive; needs evaluation |
| Aluminum Company of America (ALCOA)<br>1450 W. Rincon | Contaminants and media affected not specified<br>Inactive; needs evaluation 2006 |
| CA Rehab Center | Military Evaluation Site |
| Spacex, Inc.<br>202 E. 5th St. | Contaminants and media affected not specified<br>Inactive; needs evaluation |
| Rancho Serrano High School<br>9001 Cajalco Road | Active mine; needs evaluation 2008 |
| Naval Ordnance Lab | Contaminants: Explosives<br>Needs evaluation 2005 |
| Corona Annex<br>S Howard St/E 6th St | Contaminants: Explosives and munitions debris affected soil<br>Inactive; action required 2016 |
| IMCO former waste disposal site<br>1462 Quarry St | Contaminants metals, polychlorinated biphenyls (PCBs)<br>Certified operations & maintenance plan; land use restrictions as of 2010 |

Sources: SWRCB 2017; DTSC 2017; USEPA 2017.

Figure 5.9-1

# HAZERDOUS MATERIALS CLEANUP SITES IN CORONA (OPEN CASES)




Date Saved: 10/8/2019

## Legend

- City Boundary
- Sphere of Influence Areas

**Hazardous Materials Sites**

- Brownfield Sites
- EnviroStor Open Cases
- GeoTracker LUST Open Cases
- GeoTraker Cleanup Sites
- Superfund Sites

Notes:
**Brownfields:** Properties for which use or reuse is constrained by the presence or potential presence of hazardous materials.

**LUST:** Leaking underground storage tanks.

*Source:*
*EJScreen, US Environmental Protection Agency, 2017a;*
*EnviroMapper, US Environmental Protection Agency, 2017b;*
*Superfund Enterprise Management System [SEMS]*
*US Environmental Protection Agency, 2017c;*
*GeoTracker, State Water Resources Control Board, 2017;*
*EnviroStor, Department of Toxic Substances Control, 2017;*

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0 0.5 1 1.5 2 Miles

PLACEWORKS

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The major concentrations of industrial land uses in the City and SOI are near the BNSF Railway tracks and SR-91 in the north half of the City and SOI, and two sand and gravel quarries in the northeast quadrant of the City and SOI. Other industrial land uses are scattered throughout much of the City (see Figure 3-4, *Existing Land Use*).

There are no large areas of intensive commercial agriculture in the City and SOI. Much of the eastern portion of the SOI is mapped as grazing land by the California Division of Land Resource Protection (DLRP 2017).

Two hospitals are in Corona—Corona Regional Medical Center-Main at 800 South Main Street, and Corona Regional Medical Center-Magnolia at 730 Magnolia Avenue (OSHPD 2017).

### *Hazardous Material Transport*

Releases of explosive, highly flammable, or toxic materials can cause fatalities and injuries, necessitate evacuations, destroy property, or result in serious environmental effects if toxic materials seep into surface or groundwater supplies. In Corona, hazardous materials and wastes are transported on the SR-91 and I-15. Notably, the City has no direct authority to regulate the transport of hazardous materials on federal and state highways or rail lines. When transporting explosives, inhalation hazards or other potentially dangerous materials, and controlled quantities of radioactive materials, state and federal governmental agencies require transporters to include safeguards to reduce the risks of hazardous materials release.

### *Emergency Response Planning*

The role of the Corona Fire Department in emergency response planning in Corona, and the City's Emergency Operations Plan and Local Hazard Mitigation Plan, are described above in Section 5.9.1.1, *Regulatory Framework*.

## Airport-Related Hazards

The Corona Municipal Airport is located approximately three miles northwest of Downtown Corona, and is sited on approximately 100 acres under a long-term lease agreement with the US Army Corps of Engineers. The airport is nontowered and serves general aviation aircraft for recreational use, and has no commercial flights. Because the airport is located on Army Corps of Engineers land and is used for recreational flying only, it is under the jurisdiction of the City's Parks and Community Services Department. Home to 350 to 400 general aviation aircrafts, the airport has approximately 50,000 annual operations. The flight path for arrivals to the Corona Municipal Airport is from the northeast, and the flight path for departures is towards the southwest.

State and federal law require the designations of areas surrounding all airports where regulations are in place to protect structures and people from potential crash hazards. The area surrounding the Airport where land uses are regulated to minimize air crash hazards to persons on the ground is north of SR-91, extending east to just beyond Cota Street and west to near Prado Dam (see Figure 5.9-2, *Corona Municipal Airport Compatibility Factors*). The area surrounding the Airport where building heights are regulated to prevent obstructions to air navigation is similar in east-west extent to the hazard area, but extends to just south of the intersection of Paseo Grande and Via del Rio in the southwest quadrant of the City and SOI.

Portions of the City are in the airport influence area, which is generally the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses. The airport influence area constitutes the area within which certain land use actions are subject to ALUC review.

Riverside ALUC has set forth specific compatibility criteria for land uses within the general vicinity of the Corona Municipal Airport in their Airport Land Use Compatibility Plan (ALUCP) (Riverside County 2004). The Corona Municipal Airport has four principal airport/land use compatibility concerns: 1) exposure to airport noise; 2) land use safety for people on the ground and occupants of the aircraft; 3) protection of airport airspace; and 4) general concerns related to aircraft overflight. Compatibility of land uses in Corona is defined in terms of distances from runways and airport activity.

The Riverside County ALUC has prepared a hazard map that delineates six zones:

- **Zone A**, Runway Protection Zone. An area ("clear zone") off the end of a runway to enhance the protection of people and property on the ground.
- **Zone B1**, Inner Approach/Departure Zone. Where aircraft are typically 200 to 400 feet above runway elevation for straight-in arrivals or straight-out departures.
- **Zone B2**, Adjacent to Runway. This area fills out gaps in Zone B1 and enhances protection for approach/departures that veer off the runway.
- **Zone C**, Extended Approach/Departure Zone. This refers to an area where planes are flying around 800 feet to 1,000 feet from the ground.
- **Zone D**, Primary Traffic Patterns and Runway Buffer Zone. This refers generally to an area that includes most of regular air traffic patterns and pattern entry routes.
- **Zone E**, Other Airport Environs.

Figure 5.9-2 illustrates the airport land use compatibility zones around the Corona Municipal Airport. Table 5.9-2, *Accidents at Corona Municipal Airport*, summarizes airport accidents. Accidents peaked in the 1980s and have consistently declined since then. The 2010 to 2020 decade shows the fewest crashes since records were available from the 1980s.

Table 5.9-2 Accidents at Corona Municipal Airport

| Decade | No. of Incidents | Description |
|---|---|---|
| 1982–89 | 38 | This decade represented a high mark, with 38 accidents (more than 5.4 per year), resulting in 28 fatalities and 15 serious injuries. |
| 1990–99 | 29 | This decade saw 29 accidents (slightly above 3.2 year), resulting in 14 fatalities, and 2 serious injuries. |
| 2000–09 | 25 | This decade saw a further decline, with 25 accidents (2.7 annually), resulting in 19 fatalities and no serious injuries. |
| 2010–19 | 17 | This decade saw the lowest number of accidents, with 17 through 2019 (1.7 annually), resulting in 5 fatalities and 5 serious injuries. |

Source: U.S. National Transportation Safety Bureau 2018; Corona 2019.

## Fire Hazards

Very High Fire Hazard Severity Zones are mapped by the California Department of Forestry and Fire Protection (CAL FIRE) along the southwest City boundary and the west end of the City and in adjacent parts of the SOI; in the southeast corner of the City; in much of the part of the SOI southeast of the City; and in part of the easternmost portion of the SOI east of the Community of El Cerrito (CAL FIRE 2009) (see Figure 5.20-2 *Very High Fire Hazard Severity Zones,* in Section 5.20, *Wildfire*). The City of Corona is responsible for the cost of fire suppression within the City, and the State is responsible for the cost of fire suppression in the SOI. A history of wildfires that have occurred in the City and SOI from 1900 to 2017 is shown in Figure 5.20-1, *Wildfire History*, in Section 5.20, *Wildfire*.

The wildfire environment consists of three components: fuel, topography, and weather (LACCEO 2014). The City of Corona is susceptible to wildfire, surrounded by areas supporting flammable vegetation in the Cleveland National Forest on the south, Chino Hills State Park on the northwest, and Gavilan Hills on the south. Portions of the City and SOI consist of steep hills, particularly along the southwest boundary of the City and SOI on the northeast foot of the Santa Ana Mountains, and in some of the east and southeast parts of the City and SOI in the Gavilan Hills. Weather contributing to wildfire hazard is hot and dry, with strong winds and low vegetation moisture. Corona's climate includes hot summers (average high temperatures are 92.3°F in July) and a long dry season (most rainfall occurs between November and April) (WRCC 2018). Strong, downslope Santa Ana winds occur occasionally in fall and winter.

### *Wildfire Risks*

In the City and SOI there are 9,300 housing units and 3 million square feet of office, commercial, and industrial land uses in Very High Fire Hazard Severity Zones. Additionally, essential public facilities and services are also located in the VHFHSZs, which includes two freeways (I-15 and SR-91), electrical transmission lines, and some public utilities. The primary assets at risk are seven water reservoirs and three radio communication towers situated within the VHFHSZ.

### Fire Protection

#### *Corona Fire Department*

The City of Corona Fire Department provides fire protection and emergency medical services (fire prevention, fire operations, emergency medical services, emergency management) from seven fire stations located throughout the City. The City also provides secondary backup for areas covered by Riverside County Fire. Figure 5.15-1, *Fire Response Zones,* of Section 5.15, *Public Services*, shows the response zones for the individual fire stations in the City of Corona. The City of Corona employs 117 staff members—105 employees throughout the seven fire stations and 12 at headquarters and other ancillary facilities.

#### *Riverside County Fire Department*

The Riverside County Fire Department operates five stations that primarily serve the City's SOI. Riverside County/CAL FIRE responds to additional calls within the broader Temescal Valley. In 2016, the County responded to approximately 2,044 service calls, of which 70 percent were medical services/rescue. The County Fire average time for first response is 5.8 minutes for medical service and 7.7 minutes for fire/rescue.

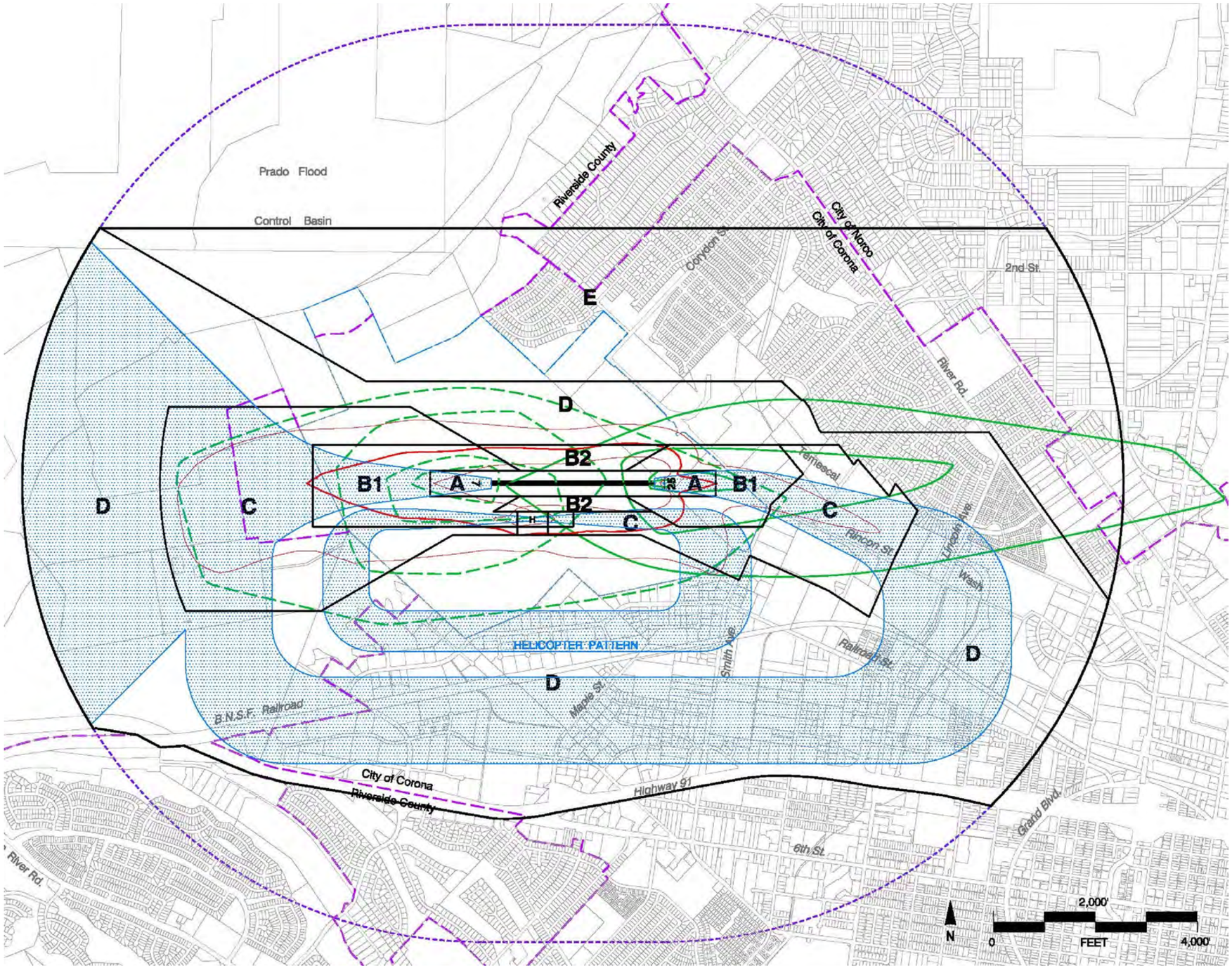
Refer to Section 5.15, *Public Services*, and Section 5.20, *Wildfire,* for further detail on fire services and fire hazards in the City of Corona and its SOI.

## Evacuation Routes

Corona's location makes it susceptible to wildfires, earthquakes, and floods. Most major roadways and transit systems within or exiting the community crossed one or more disaster-prone areas. These disasters can cause significant damage to transportation infrastructure, preventing or impeding access by emergency responders and evacuation by residents. Regional access is limited to the I-15 and SR-91, both which can be affected by wildfires. For areas at the wildland/urban interface, the City has Structure Protection Plans (SPPs) to address the evacuation routes. The Riverside County Strategic Contingency Plan that coincides with the Corona SPP incorporates these routes. The Corona Fire Department in partnership with CAL FIRE has published its Ready, Set, Go! Wildfire Action Plan to give citizens the tools needed to prepare for such an event. The City makes available the timely notification of wildland fires and debris flows. The City, along with Cassidian Communications, offers a local notification system that sends telephone notifications to residents and businesses within the community. Corona also maintains a CERT program where community members learn the various hazards they are most susceptible to in their local jurisdiction, preparedness methods, mitigation efforts and the various types of evacuations, with an emphasis that direction/route can easily change and is incident driven.

Figure 5.9-2

# CORONA MUNICIPAL AIRPORT COMPATIBILITY FACTORS




Legend

**Compatibility Zones**

- Airport Influence Area Boundary
- Zone A
- Zone B1
- Zone B2
- Zone C
- Zone D
- Zone E

**Noise and Overflight Compatibility Factors**

- 65 dB CNEL
- 60 dB CNEL
- 55 dB CNEL

} Future Average Annual Day

General Traffic Pattern Envelope (approximately 80% of aircraft overflights estimated to occur within these limits)

H Helipad

**Safety and Airspace Compatibility Factors**

Aircraft Departure Accident Risk Intensity Contours * (Shown only for Takeoffs to the West)

Aircraft Approach Accident Risk Intensity Contours * (Shown only for Landings from the East)

FAR Part 77 Conical Surface Limits
No Terrain Penetration of FAR Part 77 Surfaces

**Boundary Lines**

- Airport Property Line
- City Limits

* Aircraft accident risk intensity contours are derived from nationwide accident location data in California Division of Aeronautics database. The contours show relative intensities (highest concentrations) of near-airport accidents in 20% increments. The contour shapes represent a wide range of general aviation airports and have not been modified to reflect the flight tracks for this airport.

Source:
Exhibit CO-6 Riverside County Airport Land Compatibility Plan West County Airport Background Data
Riverside County Airport Land Use Commission October 2004

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PLACEWORKS

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## 5.9.2 Thresholds of Significance

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

H-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

H-2 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.

H-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of an existing or proposed school.

H-4 Be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

H-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would result in a safety hazard or excessive noise for people residing or working in the project area.

H-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

H-7 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

## 5.9.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential hazards and hazardous materials impacts.

### Land Use Element

- **LU-2.1** Locate and design development to reflect Corona's unique physical setting considering its natural topography, environmental resources, natural hazards, and opportunities for views in accordance with this plan's policies.

- **LU-4.3** Allow for the development of vacant lands on the periphery of existing development that complements the scale and pattern of existing uses; protects significant plant, animal, and other natural environmental resources; protects development and population from natural hazards; and where it is logical and feasible to extend infrastructure.

- **LU-10.3** Minimize the removal of native landscape and integrate with new residential development, to the extent feasible and practical for fire control; require adherence to building construction and site designs necessary to minimize risks from wildfire, such as implementation of fuel modification areas, concrete tile roofs and boxed eaves.

- **LU-10.4** Require that new development and major rehabilitations be located, designed, and built to maintain natural drainages, riparian vegetation, and the viability of habitats, except as necessary to protect from flooding or wildfire, or that impacted areas be properly mitigated.

- **LU-12.7** Regulate the development of industrial uses (consistent with local regulation and state law) that use, store, produce, or transport toxic and hazardous materials; generate unacceptable levels of air or noise pollution; or result in other adverse impacts.

- **LU-16.1** Accommodate open spaces that can be used for recreation and conserved to protect significant plant and animal habitats and population from the risks of flood, fire, and seismic hazards in accordance with the designations of the land use plan.

- **LU-16.7** Work with Corona Fire, CAL FIRE and Forest Service and with property owners in affected areas to reduce and minimize the hazards associated with wildfire in the hillsides and open spaces, consistent with the goals and policies of the safety element.

- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

- **LU-23.1** Maintain, implement, and revise as appropriate an airport master plan that will guide the long-term orderly development, operation, and use of the Corona Municipal Airport.

- **LU-23.2** Work cooperatively with the Riverside County Airport Land Use Commission in periodically refining, implementing, and protecting airport influence zones around the Corona Municipal Airport.

- **LU-23.3** Work to limit the encroachment of uses that potentially pose a threat to continued airport operations, including intensification of residential, commercial, and industrial facilities within the airport safety zone and areas impacted by airport noise.

- **LU-23.4** Review proposed projects within the airport influence area of the Corona Municipal Airport for consistency with applicable airport land use compatibility plan policies adopted by the Riverside County Airport Land Use Commission and City of Corona.

- **LU-23.5** Limit building heights and land use intensities beneath airport approaches and departure paths to protect public safety, comply with the Corona Municipal Airport Land Use Compatibility Plan, and applicable state and federal regulations.

- **LU-23.6** Allow emergency responders to use the Corona Municipal Airport to respond to local and regional emergencies and disasters (urban and wildland fire, hazardous material response, etc.).

- **LU-23.7** Ensure, to the extent feasible, that environmental impacts such as noise, air quality, pollution, traffic congestion, and public safety hazards associated with continued operation of Corona Municipal Airport are mitigated to the extent practicable.

- **LU-23.8** Prior to the adoption or amendment of the general plan or any specific plan, or the adoption or amendment of a zoning ordinance or building regulation within the airport influence area of any airport land use compatibility plan, refer such proposed actions to the ALUC for review and determination as provided by the airport land use law.

### Circulation Element

- **CE-1.11** Provide all residential, commercial, and industrial areas with efficient and safe access for emergency vehicles, including undeveloped areas or those on the hillsides in high or very high fire hazard severity zones.

### Infrastructure and Utilities Element

- **IU-6.7** Continue to work with providers and businesses to educate the community and to provide household hazardous material, used oil, and electronic waste collection for the community.

### Public Safety Element

#### *Hazardous Materials*

- **PS-3.1** Enforce federal and state regulations and local ordinances in accordance with Certified Unified Program Agency requirements that require all users, producers and transporters of hazardous materials and waste to clearly identify materials that they store, use or transport, and make available emergency response plans, emergency release reports, hazardous material inventory reports, and toxic chemical release reports to reduce the risk from natural or other hazards and effectively protect the community.

- **PS-3.2** Require projects to comply with applicable land use regulation, building and fire codes, and local ordinances; determine the need for buffer zones/setbacks, building modifications, site design, operational changes, or other measures to minimize risk from hazardous materials.

- **PS-3.3** Review and update the City of Corona's Hazardous Material Area Plan every three years as required by the Health and Safety Code Chapter 6.95 and implement policies contained therein. Ensure newly developed and annexed areas of the City are included in the Plan and that the area plan policies are coordinated with those of adjacent municipalities.

- **PS-3.4** Utilize local enforcement powers for land use regulation, code enforcement, and nuisance abatement to address the use and/or discharge of hazardous material to the air, ground, wastewater collection and storm drain systems, groundwater, or surface water bodies.

- **PS-3.5** Actively work with federal, state, county, and responsible entities to ensure proper cleanup activities are undertaken in as a timely manner as possible and are effectively managed to clean up contaminated sites so as to protect the public's health and safety**.**

- **PS-3.6** Continue to promote the safe disposal of hazardous and toxic substances that are used in private households through the support of the hazardous materials collection efforts and address the long-term need for a local facility working with the County.

- **PS-3.7** Coordinate hazardous material planning and appropriate response efforts with other City departments, as well as local, county, and state agencies to maintain readiness to mitigate local impacts resulting from hazardous material-induced emergencies.

- **PS-3.8** Require property owners of contaminated sites to develop and implement, at their own expense, a site remediation plan to the satisfaction of the Riverside County and the California Department of Toxic Substances Control.

- **PS-3.9** Minimize the potential risk of contamination to surface water and groundwater resources and implement restoration efforts to resources adversely impacted by past urban and rural land use activities.

### *Airport Hazards*

- **PS-4.1** Protect flight paths from encroachment due to proposed development projects or redevelopment in Corona by using the Riverside County ALUCP and Corona Airport Master Plan to evaluate the consistency of proposed land uses and development projects.

- **PS-4.2** Regulate building heights, land use intensities, and occupancies beneath airport approaches and departure paths consistent with the Riverside County ALUCP, the Corona Municipal Airport Master Plan, and all other applicable State and Federal regulations.

- **PS-4.3** Ensure that review by the Riverside County Airport Land Use Commission for projects within the airport influence area occurs within the early stages of the development review process by the City and prior to project approval by the City.

- **PS-4.4** Periodically review the Corona Municipal Airport Master Plan to update operational and safety procedures, reflect State and Federal mandates, improve the use of airport property, and recommend land use capability standards for land surrounding the airport.

- **PS-4.5** Submit proposed projects to the ALUC for review if new development (including buildings, antennas, other structures) has a height exceeding:

    - 35 feet in Compatibility Zone B1, B2, or a Height Review Overlay Zone
    - 70 feet within Compatibility Zone C

- 150 feet within Compatibility Zone D or E
- 200 feet or taller regardless of their location

- **PS-4.6** Periodically monitor the potential for wildlife hazards to the flights and operations of the Corona Municipal Airport emanating from the Prado Basin, retention basins, golf courses, Santa Ana River, or other areas. Comply with federal wildfire strike hazards regulations if hazard exists.

- **PS-4.7** Periodically consult with the Riverside County Airport Land Use Commission in matters affecting the operation of the Corona Municipal Airport and in regard to proposed development within the Influence Area that affect the safety and operations of the airport.

### *Fire Hazards*

- **PS-7.1** Require larger developments to incorporate site design features that help ensure maximum visibility and security for entrances, pathways, streets and sidewalks, corridors, public and private open space, and parking lots and structures.

- **PS-7.2** Require the incorporation of appropriate lighting that provides adequate exterior illumination around commercial, business park, public spaces, parking lots, and multifamily structures.

- **PS-7.3** Work with traffic engineers to develop methods through design, enforcement, and engineering to reduce the volume and severity of vehicle, pedestrian, and bicycling accidents citywide and around sensitive land uses such as schools, apartments, and other highly traveled uses.

- **PS-7.4** Enhance public awareness and participation in crime prevention by encouraging changes to be made through crime prevention by design (vegetation selection and maintenance, motion sensors, lighting, etc.) and establishing and participating with police in neighborhood safety and crime prevention programs (e.g. neighborhood watch).

- **PS-7.5** Require large-scale retail developments to incorporate video surveillance security systems within their facilities and grounds to monitor open public spaces and, where appropriate and feasible, provide office space for police facilities.

- **PS-7.6** Provide opportunities for police department review and input regarding appropriate methods to mitigate the impacts of land use permits that have functions and characteristics that may impose a higher than normal level of security and police protection.

- **PS-7.7** Provide appropriate security measures around sensitive essential public facilities, such as water, reclaimed water, radio towers, and other facilities required for use for public health and safety purposes.

- **PS-8.1** Provide needed fire stations and maintain them in good condition to enable timely and effective response to emergencies in keeping with city standards, community service expectations, and city financial resources.

- **PS-8.2** Ensure that fire staff at all levels are sufficient in number and appropriately trained to effectively plan and respond to all types of fire and related emergencies in the community.

- **PS-8.3** Maintain mutual aid, automatic aid, and other multi-agency cooperative agreements to ensure that urban fire, wildfire, tactical response, hazmat, and other services are available at all times.

- **PS-8.4** Regular maintain, upgrade, and replace fire apparatus and support vehicles and needed equipment to be prepared and effectively respond to fire, traffic, medical, and related emergencies.

- **PS-8.5** Conduct periodic fire-related exercises with City public safety personnel and those of nearby jurisdictions, and the state to remain prepared for situations requiring multi-jurisdictional coordinated response.

- **PS-8.6** Participate in and conduct regular training of all fire and related personnel to ensure that staff are prepared to address emergency medical, fire, and other related emergencies in the community.

- **PS-8.7** Adhere to and periodically update fire department strategic plans, policies and procedures, and other internal standards to continuously meet service level requirements and priorities, including department response times.

- **PS-8.8** Ensure that revenues are collected from new development, existing developments, and other land uses in an amount that is commensurate with their respective impact on overall city fire operations.

- **PS-8.9** Continue to monitor and adhere to the latest changes in state legislation and guidelines with respect to fire planning, prevention, and suppression.

- **PS-9.1** Continue to review and adopt the most recent edition of the California Building Standards Code (Title 24), including local amendments, to ensure the use of the latest technology and building standards in the city.

- **PS-9.2** Continue to conduct all existing occupancy inspections, including those that are state mandated within the appropriate time frame for compliance with fire safety regulations and providing education to business owners.

- **PS-9.3** Ensure that roadway, bridge and driveway standards are adequate and appropriately maintained to allow safe access to premises where emergencies take place and safe evacuations wherever needed.

- **PS-9.4** Maintain safe and accessible evacuation routes throughout the community; take precautions and ensure backup or mitigations for routes crossing high hazard areas (e.g., flood, seismic, high fire, etc.).

- **PS-9.5** Work cooperatively with city departments, community groups, and individual homeowners to ensure that vegetation management is being maintained in the designated fuel modification areas.

- **PS-9.6** Work cooperatively with CAL FIRE, US Forest Service, Department of Corrections, and other agency stakeholder to advocate for the installation and maintenance of fire breaks in wildland areas surrounding Corona.

- **PS-9.7** Encourage and provide fire safety education and support programs for residents of all ages to promote participation, fire prevention, voluntary compliance, and community awareness/preparedness.

- **PS-9.8** Work with youth in the community and local school district to tailor programs that encourage safe practices and reduce the incidence of fire and associated damages to property and personal injury.

- **PS-9.9** Conduct fire investigations as needed on residential, commercial, industrial structures and other land uses to provide protection to the community and gather information for possible trending issues.

- **PS-10.1** Locate, when feasible, new essential public facilities outside of high fire risk areas; if not feasible, require construction and other methods to harden and minimize damage for existing/planned facilities in such areas.

- **PS-10.2** Require all improved and new homes, structures, and facilities in the very high fire hazard severity zones to adhere to additional fire safe design standards consistent with state law and local practice.

- **PS-10.3** Require all improved and new developments to be thoroughly reviewed for their impact on safety and the provision of fire protection services as part of the development review process.

- **PS-10.4** Require new and rehabilitated homes and structures to meet or exceed City fire prevention standards and state law, including building access, construction design, sprinklers, and others as required by Corona Fire.

- **PS-10.5** Require all new commercial, industrial, institutional, multiple-unit housing, mixed-use, and one- and two-family dwelling developments to install fire protection systems and encourage the use of automatic sprinkler systems where not required by local codes and ordinances.

- **PS-10.6** Require fuel modification plans and vegetation clearance standards for development in VHFHSZs to protect structures from wildfire, protect wildlands from structure fires, and provide safe access routes for the community and firefighters.

- **PS-10.7** Condition approval of parcel maps and tentative maps in VHFHSZs based on meeting or exceeding the SRA Fire Safe Regulations and the fire hazard reduction around buildings and structures regulations.

- **PS-10.8** Coordinate with the Department of Water and Power to ensure that adequate water supply and flows are available for firefighting; where inadequate, ensure provision of off-site water supply and transport.

- **PS-10.9** Continue to require visible premise identification and signage per Corona's Premise Identification Guideline that meet or exceed SRA and CFC requirements.

### *Emergency Management*

- **PS-11.1** Adhere to the Standard Emergency Management System (SEMS) and the National Incident Management System (NIMS) to coordinate effective response to emergencies and disasters.

- **PS-11.2** Maintain emergency and hazard mitigation plans; update and define roles of city departments and other partnering agencies in the event of an emergency or disaster, ensuring interagency coordination and collaboration with the Operational Area (SEMS).

- **PS-11.3** Conduct periodic emergency management exercises with city personnel and nearby jurisdictions to remain prepared for situations requiring multi-jurisdictional coordinated response.

- **PS-11.4** Maintain Structure Protection Plans and other pre-planning activities and plans to remain prepared for emergencies throughout the community.

- **PS-11.5** Ensure that the Emergency Operations Plan and Standard Operating Procedures provide for efficient and orderly notification and evacuation on a citywide basis. Ensure they address accessibility issues and mass notification capabilities utilizing our city, county, state, and federal communication systems.

- **PS-11.6** Improve continuity of operations capabilities to include the development of a City of Corona Continuity of Operations Plan, in addition to enhancing the Emergency Operation Center (EOC) readiness and the EOC responder training and exercises, and continuously testing and improving upon the effectiveness of the Emergency Operation Plan.

- **PS-11.7** Sponsor and support the public education programs and outreach efforts referencing community hazards, emergency preparedness, and response protocols and procedures. Target and partner with community groups, schools, religious institutions, and business associations (NIMS).

- **PS-11.8** Facilitate planning efforts to ensure expeditious and coordinated recovery processes following any serious emergency/disaster.

- **PS-11.9** Ensure all local, state, and federal mandates are adhered to should the City proclaim a local emergency and request any state and/or federal funding.

- **PS-11.10** Participate in the review and update of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan every five years in coordination with all participating jurisdictions and Riverside County Emergency Management Department; implement goals and objectives therein to reduce risks from hazards and guide decision-making.

- **PS-10.11** Ensure all local, state, and federal mandates are adhered to should the City proclaim a local emergency and request any state and/or federal funding.

- **PS-10.12** Participate in the review and update of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan every five years in coordination with all participating jurisdictions and Riverside County Emergency Management Department; implement goals and objectives therein to reduce risks from hazards and guide decision-making.

### Healthy Community Element

#### *Reduction in Pollution Exposure*

- **HC-2.1** Require that proposals for new sensitive land uses and/or industrial and commercial uses incorporate the adequate use of setbacks, barriers, landscaping, or other design measures as necessary to minimize air quality impacts and achieve appropriate health standards.

- **HC-2.2** Designate and maintain truck routes that are sufficient to serve the needs of industry and commerce while avoiding residential areas, schools, or other sensitive land uses so as to minimize exposure to the noise, air pollution, and vibration associated with trucks.

- **HC-2.3** Prioritize local and regional efforts, in cooperation with regional agencies, to remediate or treat contaminated surface water, groundwater, or soils to state and federal standards, and ensure that drinking water is safe and healthful to meet all local, state, and federal health standards.

- **HC-2.4** Ensure that individuals, neighborhoods, and businesses clearly understand the potential for adverse pollution, noise, odor, vibration, and lighting and glare, and the effects of toxic materials or emissions when generating uses are proposed near them.

- **HC-2.5** Require the preparation of air quality, noise, and vibration technical studies to determine the impact of proposed new development on adjacent and surrounding land uses and to identify the appropriate measures required to mitigate such impacts.

- **HC-2.6** Apply and enforce performance standards with respect to fire and explosion hazards, radio frequency or electrical disturbance, noise and vibration, dust, smoke, glare, underground storage tanks, or other potential sources of exposure to pollution.

- **HC-2.7** Keep up to date on new and amended regulations issued by state and federal regulatory agencies with respect to air, water, and other pollutants and permissible exposure; revise local ordinances and development requirements as needed to reduce exposure to pollution.

#### *Safe and Sanitary Housing*

- **HC-4.6** Support housing construction practices, where initiated by developers, that are free from asbestos, volatile organic compounds, and other chemicals known to be hazards.

### Noise Element

#### *Specific Land Use Standards*

- **N-4.4** Require municipal vehicles and noise-generating mechanical equipment purchased or used by the City to comply with noise performance standards consistent with the latest available noise reduction technology to the extent practicable and cost-effective.

- **N-4.5** Require new nonresidential development that attracts noise-generating vehicles (e.g., high volumes of traffic, trucking) to design and configure onsite ingress and egress points to divert traffic away from "noise sensitive" land uses, to the greatest extent practicable.

### Environmental Resources Element

#### *Air Resources*

- **ER-1.2** Require all public and private grading and construction activities to minimize adverse impacts on the City's water resources through the use of best management practices, as established and updated from time to time by the City of Corona.

- **ER-1.3** Implement standard conditions of approval on development and related projects that require appropriate mediation strategies if soil or groundwater contamination is encountered during project grading and construction.

- **ER-1.4** Prohibit the discharge of toxins, debris, refuse, and other contaminants into watercourses, other drainages, water bodies, and groundwater basins. Work with appropriate entities to ensure the cleanup of contamination of existing water resources.

- **ER-13.6** Reduce solid waste sent to the landfills and associated community-wide GHG emissions by ensuring all properties have access to curbside solid waste, recycled materials, and green/organic waste programs; target special programs for construction debris, household hazardous waste, etc.

## 5.9.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.9.1: Project construction and operations would involve the transport, use, and/or disposal of hazardous materials. [Thresholds H-1, H-2, and H-3]**

### General Plan

#### *Construction*

Construction in accordance with the General Plan would involve demolition, grading, and construction of new buildings. Potentially hazardous materials used during construction include substances such as paints, sealants,

solvents, adhesives, cleaners, and diesel fuel. There is potential for these materials to spill or to create hazardous conditions. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would also be short term or one time in nature. Project construction workers would be trained in safe handling and hazardous materials use.

To prevent hazardous conditions, existing local, state, and federal laws—such as those listed under Section 5.9.1.1, *Regulatory Framework*—are to be enforced at the construction sites. For example, compliance with existing regulations would ensure that construction workers and the general public are not exposed to any risks related to hazardous materials during demolition and construction activities. Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, exposure warnings, availability of safety equipment, and preparation of emergency action/prevention plans. For example, all spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable state and local regulations for the cleanup and disposal of that contaminant. All contaminated waste encountered would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility.

The following General Plan policies would minimize risks associated with businesses that use hazardous materials during construction:

- **PS-3.1** Enforce federal and state regulations and local ordinances in accordance with Certified Unified Program Agency requirements that require all users, producers and transporters of hazardous materials and waste to clearly identify materials that they store, use or transport, and make available emergency response plans, emergency release reports, hazardous material inventory reports, and toxic chemical release reports to reduce the risk from natural or other hazards and effectively protect the community.

- **PS-3.2** Require projects to comply with applicable land use regulation, building and fire codes, and local ordinances; determine the need for buffer zones/setbacks, building modifications, site design, operational changes, or other measures to minimize risk from hazardous materials.

- **PS-3.5** Actively work with federal, state, county, and responsible entities to ensure proper cleanup activities are undertaken in as a timely manner as possible and are effectively managed to clean up contaminated sites so as to protect the public's health and safety.

- **PS-3.6** Continue to promote the safe disposal of hazardous and toxic substances that are used in private households through the support of the hazardous materials collection efforts and address the long-term need for a local facility working with the County.

- **PS-3.7** Coordinate hazardous material planning and appropriate response efforts with other City departments, as well as local, county, and state agencies to maintain readiness to mitigate local impacts resulting from hazardous material-induced emergencies.

- **PS-3.8** Require property owners of contaminated sites to develop and implement, at their own expense, a site remediation plan to the satisfaction of the Riverside County and the California Department of Toxic Substances Control.

- **PS-3.9** Minimize the potential risk of contamination to surface water and groundwater resources and implement restoration efforts to resources adversely impacted by past urban and rural land use activities.

- **ER-1.2** Require all public and private grading and construction activities to minimize adverse impacts on the City's water resources through the use of best management practices, as established and updated from time to time by the City of Corona.

- **ER-1.3** Implement standard conditions of approval on development and related projects that require appropriate mediation strategies if soil or groundwater contamination is encountered during project grading and construction.

Furthermore, strict adherence to all emergency response plan requirements set forth by the Corona Fire Department (CFD) would be required throughout the duration of project construction.

### *Operations*

The General Plan Update would allow for the development of a variety of land uses, including residential, commercial, office, civic, and open space uses. Operation of the future residential uses that would be accommodated would involve the use of small quantities of hazardous materials for cleaning and maintenance purposes, such as paints, household cleaners, fertilizers, and pesticides. Operation of future commercial uses would also involve use of small amounts of hazardous materials. The types of commercial uses, and thus the types of hazardous materials to be used, are not yet known. However, the use of commercial-grade chemicals, cleaners, and solvents would be anticipated from the proposed retail/commercial uses.

The use, storage, transport, and disposal of hazardous materials by future residents and commercial and industrial tenants/owners would be required to comply with existing regulations of several agencies, including the California Department of Toxic Substances Control, US Environmental Protection Agency, California Division of Occupational Safety and Health, California Department of Transportation, and Riverside County Fire Department. Regulations that would be required of those uses that involve transporting, using, or disposing of hazardous materials include RCRA, which provides the "cradle to grave" regulation of hazardous wastes; CERCLA, which regulates closed and abandoned hazardous waste sites; the Hazardous Materials Transportation Act, which governs hazardous materials transportation on U.S. roadways; International Fire Code (IFC), which creates procedures and mechanisms to ensure the safe handling and storage of hazardous materials; CCR Title 22, which regulates the generation, transportation, treatment, storage and disposal of hazardous waste; and CCR Title 27, which regulates the treatment, storage, and disposal of solid wastes. For development in California, Government Code Section 65850.2 requires that no final certificate of occupancy or its substantial equivalent be issued unless there is verification that the owner or authorized agent has met, or is meeting, the applicable requirements of the Health and Safety Code, Sections 25500 through 25520.

Compliance with applicable laws and regulations governing the use, storage, transport, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts. Additionally, future residential and nonresidential uses under the General Plan Update would be constructed and operated with strict adherence to all emergency response plan requirements set forth by the Riverside County DEH and the CFD.

CalEPA has designated the Riverside County DEH as the CUPA, responsible for managing the following programs in the county:

- Underground Storage Tank Program
- Underground Storage Tank Program
- Aboveground Petroleum Storage Act Requirements
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs
- Hazardous Materials Release Response Plans and Inventories (Business Plan)
- California Accidental Release Prevention
- Hazardous Material Management Plans

The CFD is a Participating Agency under the CUPA. Of the six programs mentioned above, CFD administers Hazardous Materials Release Response Plan and Inventory Program and Hazardous Materials Management Plans and Inventory and permits for handling underground storage and storage of hazardous materials pursuant to the Corona Fire Code.

Additionally, General Plan policies PS-3.1, PS-3.5 through PS-3-9, and the following policies would minimize risks from businesses that use hazardous materials:

- **ER-1.4** Prohibit the discharge of toxins, debris, refuse, and other contaminants into watercourses, other drainages, water bodies, and groundwater basins. Work with appropriate entities to ensure the cleanup of contamination of existing water resources.

- **HC-2.4** Ensure that individuals, neighborhoods, and businesses clearly understand the potential for adverse pollution, noise, odor, vibration, and lighting and glare, and the effects of toxic materials or emissions when generating uses are proposed near them.

- **LU-12.7** Regulate the development of industrial uses (consistent with local regulation and state law) that use, store, produce, or transport toxic and hazardous materials; generate unacceptable levels of air or noise pollution; or result in other adverse impacts.

### *Accidental Release*

The use, storage, and transport of hazardous materials and hazardous wastes in compliance with the laws and regulations mentioned above would minimize the potential for releases of hazardous materials that could pose substantial hazards to the public or the environment and would entail prompt containment and cleanup of spills. Residential uses, some civic uses such as schools and parks, and some commercial uses utilize only small amounts of hazardous materials—such as cleansers, paints, fertilizers, and pesticides—and mostly or entirely

for cleaning and maintenance purposes. Use of such small amounts of hazardous materials would not pose substantial hazards to the public or the environment through accidental releases. Businesses handling reporting quantities of hazardous or extremely hazardous materials would maintain business plans including: procedures in the event of a hazardous materials release, procedures for immediate notification of all appropriate agencies and personnel, identification of local emergency medical assistance, contact information for company emergency coordinators, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel.

Additionally, General Plan policies PS-3.1, PS-3.5 through PS-3-8, and the following General Plan policies would minimize risks from accidental release:

- **PS-3.2** Require projects to comply with applicable land use regulation, building and fire codes, and local ordinances; determine the need for buffer zones/setbacks, building modifications, site design, operational changes, or other measures to minimize risk from hazardous materials.

- **PS-3.3** Review and update the City of Corona's Hazardous Material Area Plan every three years as required by the Health and Safety Code Chapter 6.95 and implement policies contained therein. Ensure newly developed and annexed areas of the City are included in the Plan and that the area plan policies are coordinated with those of adjacent municipalities.

- **PS-3.4** Utilize local enforcement powers for land use regulation, code enforcement, and nuisance abatement to address the use and/or discharge of hazardous material to the air, ground, wastewater collection and storm drain systems, groundwater, or surface water bodies.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The Climate Action Plan would not affect the transport, use, and/or disposal of hazardous materials in the City or SOI. Consequently, implementation of the City's Climate Action Plan would result in less than significant impacts to the transport, use, and/or disposal of hazardous materials.

## Impact 5.9-2: The project site is on a list of hazardous materials sites. [Threshold H-4]

### General Plan

There are numerous hazardous materials sites in the City and SOI. A few dozen sites of the greatest concern are described in Table 5.9-1 above; a more extensive list is in Appendix H, *Hazardous Materials Site List*. Development of projects in accordance with the General Plan would disturb soil in which soil, soil vapor, and/or groundwater may be contaminated with hazardous materials exceeding environmental screening levels for the proposed land uses.

Any development, redevelopment, or reuse on or next to hazardous materials sites would require an environmental site assessment by a qualified professional to ensure that the relevant projects would not disturb hazardous materials sites or plumes of hazardous materials diffusing from one of the hazardous materials sites, and that any proposed development, redevelopment, or reuse would not create a substantial hazard to the public or the environment. Each development project involving a purchase or lease would have a Phase I Environmental Site Assessment (ESA) conducted for its project site. Those ESAs identifying recognized environmental conditions would recommend Phase II ESAs consisting of sampling and testing of soil, soil vapor, and/or groundwater for hazardous materials; and human health risk assessments based on concentrations of hazardous materials identified. Where Phase II ESAs identified substantial human health risks, remediation of hazardous materials would be recommended before the City of Corona would issue building permits for the affected projects.

Given that Corona has a number of hazardous materials sites, future hazardous materials impacts may occur from development in accordance with the General Plan Update. However, properties contaminated by hazardous substances are regulated at the local, state, and federal level and are subject to compliance with stringent laws and regulations for investigations and remediation. For example, compliance with the CERCLA, RCRA, California Code of Regulations, Title 22, and related requirements would remedy all potential impacts caused by hazardous substance contamination. Therefore, buildout of the General Plan Update would result in a less than significant impact upon compliance with existing laws and regulations.

Additionally, the following General Plan policies would minimize risks from hazardous materials sites:

- **PS-3.5** Actively work with federal, state, county, and responsible entities to ensure proper cleanup activities are undertaken in as a timely manner as possible and are effectively managed to clean up contaminated sites so as to protect the public's health and safety.

- **PS-3.8** Require property owners of contaminated sites to develop and implement, at their own expense, a site remediation plan to the satisfaction of the Riverside County and the California Department of Toxic Substances Control.

## Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect hazard materials sites in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to hazardous materials sites.

| Impact 5.9-3: | Implementation of the proposed project would not result in safety hazards or excessive noise for people residing or working in the airport influence area of the Corona Municipal Airport. [Threshold H-5] |
|---|---|

## General Plan

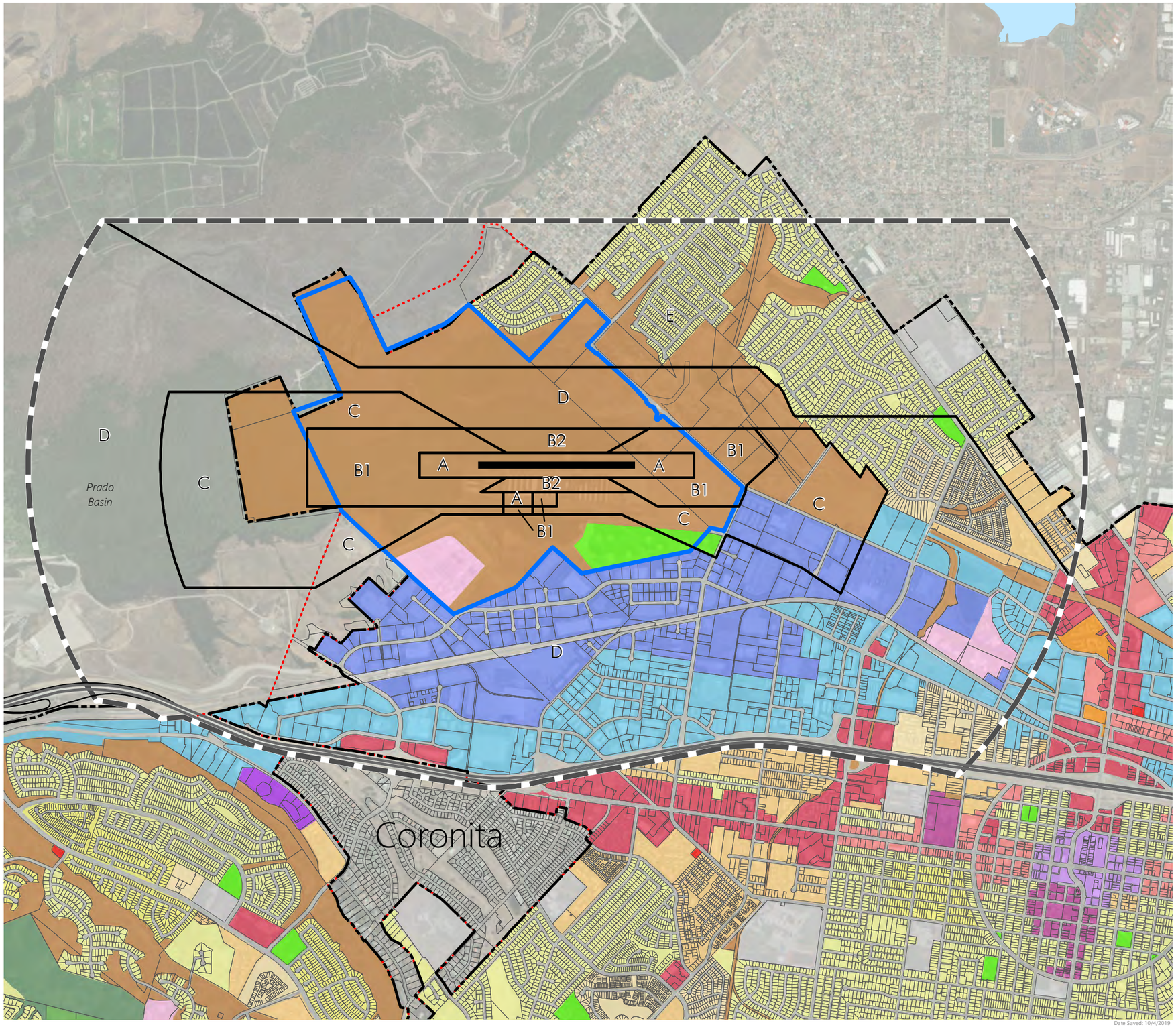
Airport operations and their accompanying noise and safety hazards require careful land-use planning on adjacent and nearby lands to protect the residential and business communities in Corona from the potential hazards that could be created by airport operations. Pursuant to Section 21096 of the Public Resources Code, the lead agency must consider whether the project will result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area. Airport land-use planning and consistency with the 2004 Riverside County Airport Land Use Compatibility Plan (ALUCP) for the Corona Municipal Airport is discussed in detail in Section 5.11, *Land Use and Planning*. Figure 5.9-3, *Corona Municipal Airport Compatibility Zones and Land Use,* shows the General Plan land use designations that lie within the different airport compatibility zones.

### *Potential Hazards to Aircrafts, People, and Property*

Airport safety hazards include hazards posed to aircraft and hazards posed by aircraft to people and property on the ground. With proper land-use planning, aircraft safety risks can be reduced, primarily by avoiding incompatible land uses. The Corona Municipal Airport is predominantly a recreational airport. Since accidents and several high-profile collisions peaked in the 1980s, airport safety has improved, and the number of accidents and collisions has declined every decade since then. Because the airport is not planned for expansion and would remain primarily recreational in nature, and only lower elevation buildings surround it and would continue to surround it upon project implementation, the Corona Municipal Airport poses no unique hazards. Buildout of the proposed project could involve development within the Corona Municipal Airport influence area. Table 5.9-3, *Consistency with ALUC Safety Zones for the Corona Municipal Airport,* shows that impacts to potential hazards within each zone as a result of project implementation would be less than significant.

Figure 5.9-3

# CORONA MUNICIPAL AIRPORT COMPATIBILITY ZONES AND LAND USE




Date Saved: 10/4/2019

## Legend

- City Boundary
- Sphere of Influence Areas
- Corona Municipal Airport
- Runway
- Corona Municipal Airport Influence Area Boundary
- Estate Residential (ER)
- Rural Residential (RR 2)
- Low Density Residential (LDR)
- Low Medium Density Residential (LMDR)
- Medium Density Residential (MDR)
- High Density Residential (HDR)
- Urban Density Residential (UDR)
- General Commercial (GC)
- Office Professional (OP)
- Mixed Use Downtown (MUD)
- Mixed Use: Commercial/Residential (MU 1)
- Mixed Use: Industrial/Commercial (MU 2)
- Light Industrial (LI)
- General Industrial (GI)
- Parks, Open Space Recreational (P, OS/R)
- Open Space General (OS, OS/G)
- School (S)
- Fire Station (FS)
- Utility (U)

*Source:*
*Riverside County Land Use Compatibility Plan Policy Document October 2004*

CORONA General Plan EIR

0 0.5 Miles

PLACEWORKS

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Table 5.9-3 Consistency with ALUC Safety Zones for the Corona Municipal Airport.

| Zone | Prohibited Uses | Consistency of the Land Use Plan with the Safety Zones |
|---|---|---|
| A | • All structures except ones with location set by aeronautical function<br>• Assemblages of people<br>• Objects exceeding FAR Part 77 height limits<br>• Storage of hazardous materials<br>• Hazards to flight | According to Figure 5.9-3, Zone A has a General Plan Land Use designation of Open Space General. The Open Space General designation applies to lands permanently committed or protected for open space purposes due to their value as habitat, topography, scenic quality, public safety (e.g., flood control channels), or comparable purpose. Therefore, none of the prohibited uses would be developed in Zone A as these uses are not permitted under the General Plan designation. |
| B | • Children's schools, day care centers, libraries<br>• Hospitals, nursing homes<br>• Places of worship<br>• Buildings with >2 aboveground habitable floors<br>• Highly noise-sensitive outdoor nonresidential uses<br>• Aboveground bulk storage of hazardous materials<br>• Critical community infrastructure facilities<br>• Hazards to flight | See response to Zone A. None of the prohibited uses would be developed in Zone B. |
| C | • Children's schools, day care centers, libraries<br>• Hospitals, nursing homes<br>• Buildings with >3 aboveground habitable floors<br>• Highly noise-sensitive outdoor nonresidential uses<br>• Hazards to flight | According to Figure 5.9-3, Zone C has a General Plan Land Use designation of Open Space General; Parks, Open Space Recreational, Utility, and General Industrial. The Open Space General designation applies to lands permanently committed or protected for open space purposes due to their value as habitat, topography, scenic quality, public safety (e.g., flood control channels), or comparable purpose. The Open Space Recreational applies to lands committed as open space for public or private recreational purposes, such as golf courses, and the General Industrial designation accommodates a wide range of manufacturing construction, transportation, wholesale trade, warehousing, vehicle storage, and related service activities (mineral resource mining activities are also included in this category).<br><br>The total land within Airport Compatibility Zone C is approximately 31,510 acres. However, only 44.8-acres, either within or partially within the Compatibility Zone C have industrial land with employment-generating uses with the rest either designated as open space or located outside the City of Corona. Within the 44.-8acres, there are a total of 668 employees. The highest existing employment density within the parcels that make up Airport Compatibility Zone C is 21 employees/acre, which is substantially less than the maximum employment density outlined in ALUC policies.<br><br>Currently, the eastern portion of Butterfield Park falls within the Airport Compatibility Zone C. This portion of the park includes a baseball field, a softball field, a maintenance shed, picnic tables, and part of a play area. The portions of the park that are within the Compatibility Zone Z would not have a density of 75/people or more.<br><br>Therefore, none of the prohibited uses would be developed in Zone C as these uses are not permitted under the General Plan designation, and the population density within Zone C is substantially below the maximum population density; impacts would be less than significant. |

Table 5.9-3 Consistency with ALUC Safety Zones for the Corona Municipal Airport.

| Zone | Prohibited Uses | Consistency of the Land Use Plan with the Safety Zones |
|---|---|---|
| D | • Highly noise-sensitive outdoor nonresidential uses<br>• Hazards to flight | According to Figure 5.9-3, there are several General Plan Land Use designations within this Zone including: Open Space General; General Industrial; Parks, Open Space Recreational; Low Density Residential; Light Industrial; General Commercial; Utility; and High Density Residential. These land use designations do not fall under the prohibited use categories of this Zone; therefore, impacts would be less than significant. |
| E | • Hazards to flight | As shown in Figure 5.9-3, the General Plan Land Use designations within this Zone include: Low Medium Density Residential; Medium Density Residential; High Density Residential; Parks, Open Space, Recreational; and Open Space General. These land use designations do not fall under the prohibited use categories of this Zone, therefore, impacts would be less than significant. |

Source: RCALUC 2004

In addition, the following General Plan policies minimize safety impacts from proximity to the Corona Municipal Airport:

- **PS-4.1** Protect flight paths from encroachment due to proposed development projects or redevelopment in Corona by using the Riverside County ALUCP and Corona Airport Master Plan to evaluate the consistency of proposed land uses and development projects.

- **PS-4.2** Regulate building heights, land use intensities, and occupancies beneath airport approaches and departure paths consistent with the Riverside County ALUCP, the Corona Municipal Airport Master Plan, and all other applicable State and Federal regulations.

- **PS-4.3** Ensure that review by the Riverside County Airport Land Use Commission for projects within the airport influence area occurs within the early stages of the development review process by the City and prior to project approval by the City.

- **PS-4.4** Periodically review the Corona Municipal Airport Master Plan to update operational and safety procedures, reflect State and Federal mandates, improve the use of airport property, and recommend land use capability standards for land surrounding the airport.

- **PS-4.5** Submit proposed projects to the ALUC for review if new development (including buildings, antennas, other structures) has a height exceeding:

  - 35 feet in Compatibility Zone B1, B2, or a Height Review Overlay Zone
  - 70 feet within Compatibility Zone C
  - 150 feet within Compatibility Zone D or E
  - 200 feet or taller regardless of their location

- **PS-4.6** Periodically monitor the potential for wildlife hazards to the flights and operations of the Corona Municipal Airport emanating from the Prado Basin, retention basins, golf courses, Santa Ana River, or other areas. Comply with federal wildfire strike hazards regulations if hazard exists.

- **PS-4.7** Periodically consult with the Riverside County Airport Land Use Commission in matters affecting the operation of the Corona Municipal Airport and in regard to proposed development within the Influence Area that affect the safety and operations of the airport.

- **LU-23.1** Maintain, implement, and revise as appropriate an airport master plan that will guide the long-term orderly development, operation, and use of the Corona Municipal Airport.

- **LU-23.2** Work cooperatively with the Riverside County Airport Land Use Commission in periodically refining, implementing, and protecting airport influence zones around the Corona Municipal Airport.

- **LU-23.3** Work to limit the encroachment of uses that potentially pose a threat to continued airport operations, including intensification of residential, commercial, and industrial facilities within the airport safety zone and areas impacted by airport noise.

- **LU-23.4** Review proposed projects within the airport influence area of the Corona Municipal Airport for consistency with applicable airport land use compatibility plan policies adopted by the Riverside County Airport Land Use Commission and City of Corona.

- **LU-23.5** Limit building heights and land use intensities beneath airport approaches and departure paths to protect public safety, comply with the Corona Municipal Airport Land Use Compatibility Plan, and applicable state and federal regulations.

- **LU-23.6** Allow emergency responders to use the Corona Municipal Airport to respond to local and regional emergencies and disasters (urban and wildland fire, hazardous material response, etc.).

- **LU-23.7** Ensure, to the extent feasible, that environmental impacts such as noise, air quality, pollution, traffic congestion, and public safety hazards associated with continued operation of Corona Municipal Airport are mitigated to the extent practicable.

- **LU-23.8** Prior to the adoption or amendment of the general plan or any specific plan, or the adoption or amendment of a zoning ordinance or building regulation within the airport influence area of any airport land use compatibility plan, refer such proposed actions to the ALUC for review and determination as provided by the airport land use law.

### *Potential Aircraft Noise Impacts*

As identified in Section 5.13, *Noise*, aircraft noise in the City is typically characterized as occasional, and the majority of flights served by the Corona Municipal Airport are for recreational purposes. Existing noise contours for the Corona Municipal Airport are shown in Figure 5.13-4. As shown in Figure 5.13-4, in Section 5.13, the airport is not a substantial source of noise because the 65 dBA noise contour does not extend past the airport boundary, and noise does not substantially affect sensitive receptors in the City. The airport is half a mile from the nearest residential neighborhood. Noise exposure areas of 55 dBA CNEL and above are largely within open space and industrial use areas immediately surrounding the airport. Policy N-4.4 would restrict development of land uses within the 65 dBA CNEL contour of the Corona Municipal Airport to industrial,

agricultural, or other open space activities, and require that all development in the vicinity of the Airport comply with the noise standards in the Airport Master Plan. Consequently, noise impacts associated with proximity to the Corona Municipal Airport are less than significant.

In addition, the following General Plan policies minimize noise impacts from proximity to the Corona Municipal Airport:

- **N-4.4** Require municipal vehicles and noise-generating mechanical equipment purchased or used by the City to comply with noise performance standards consistent with the latest available noise reduction technology to the extent practicable and cost-effective.

- **N-4.5** Require new nonresidential development that attracts noise-generating vehicles (e.g., high volumes of traffic, trucking) to design and configure onsite ingress and egress points to divert traffic away from "noise sensitive" land uses, to the greatest extent practicable.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect safety hazards or result in excessive noise within two miles of the Airport in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to the safety hazards or result in excessive noise within two miles of the Airport.

**Impact 5.9-4: Project development would not affect the implementation of an emergency responder or evacuation plan. [Threshold H-6]**

### General Plan

Regional access to and from Corona is limited to I-15 or SR-91. Several larger arterials in the city funnel traffic to larger arterials and freeways. At the same time, most major roadways and transit routes exiting the community are crossed by one or more disaster prone areas–including Alquist Priolo, very high fire severity hazard zones, 100-year flood zones, dam inundation zones, and other hazards. Any of these disasters can cause damage to transportation infrastructure, preventing or impeding access by emergency responders and evacuation by residents.

For areas in the wildland/urban interface, the City has developed Structure Protection Plans (SPPs) to address evacuation routes. The Riverside County Strategic Contingency Plan that coincides with the Corona SPP incorporates these routes. The latter is a confidential document and is not available to the public. However, it is used by public safety professionals (fire, police, transit, etc.) employed by the affected jurisdictions. The City also has established evacuation plans and protocols to ensure the safe and orderly notification and evacuation of people in Corona should the need arise.

Ongoing projects are underway to improve the resilience of Riverside County cities. Resilient Inland Empire is a collaborative effort between Western Riverside Council of Governments (WRCOG) and the San Bernardino County Transportation Authority (SBCTA), funded by Caltrans, that is working to support regional and local efforts to prepare for and mitigate risks associated with climate adaptation and transportation infrastructure. This project includes:

- Regional climate collaborative, "Inland Empire Regional Climate Collaborative"
- Revision to WRCOG's community vulnerability assessment
- Pilot project assessing the true, cost of a downed or damaged transportation asset
- City-level, climate-related transportation hazards and evacuation maps
- A climate resilient transportation infrastructure guidebook and
- A regional climate adaptation and resiliency template general plan element

The City of Corona has prepared an emergency operations plan to ensure the most effective allocation of resources for the maximum benefit and protection of the civilian population in time of emergency. The objective of the emergency operations plan is to incorporate and coordinate all available City resources into an efficient organization capable of responding to any emergency. While no plan can completely prevent death and destruction, good plans carried out by knowledgeable and well-trained personnel will minimize losses. This plan establishes the emergency organization and assigns tasks and general procedures. It provides for coordination of planning efforts of the various emergency staff and service elements using the Standardized Emergency Management System and National Incident Management System with all levels of government.

The Corona Disaster Council, in accordance with Section 2.52.050 of the Corona Municipal Code, is responsible for ensuring that the plan remains current and effective. The Corona Fire Department Emergency Services Division is responsible for reviewing the entire emergency plan on an annual basis, coordinating revisions to the plan, and maintaining records of all revisions. The plan is available to the public for review. Corona Fire also prepares and implements the hazard mitigation plan and ensures submittal to the Federal Emergency Management Agency (FEMA) every five years.

To ensure the effectiveness of emergency planning and hazard mitigation, the Corona Fire Department works with an array of community partners. These include utility service providers (water, power, and sanitation), schools, community organizations, residents, and other local entities. Mutual and automatic aid agreements are also maintained with numerous surrounding local, state, and federal agencies to allow for appropriate backup services in case of an emergency, disaster, or other similar event.

As part of the 2019 Building Code adoption process, Corona Fire has amended the Fire Code to require two points of access for all new development and for areas proposing increased residential densities. In addition, Corona Fire has begun the process of identifying areas of the community where there is not a minimum of two egress routes for people to travel. These areas are predominantly older rural areas of the community or in

areas in the periphery of Corona. The City of Corona is preparing a Wildfire Assessment and future Community Wildfire Planning Program (CWPP) to address these susceptible areas in greater detail.

The buildout of the General Plan Update would not result in substantial changes to the circulation patterns or emergency access routes, and would not block or otherwise interfere with use of evacuation routes. Buildout would not interfere with operation of the City's Emergency Operations Center and would not interfere with operations of emergency response agencies or with coordination and cooperation between such agencies.

The Circulation Element provides policies to ensure that adequate, efficient, and safe access for emergency vehicles is provided.

- **CE-1.12** Provide all residential, commercial, and industrial areas with efficient and safe access for emergency vehicles, including undeveloped areas or those on the hillsides in high or very high fire hazard severity zones.

Additionally, the Public Safety Element provides policies to ensure that efficient and orderly notification and evacuation is provided on a citywide basis, as well as to maintain roadway evacuation routes to facilitate evacuations and ensure proper functionality after an emergency.

- **PS-9.3** Ensure that roadway, bridge and driveway standards are adequate and appropriately maintained to allow safe access to premises where emergencies take place and safe evacuations wherever needed.

- **PS-9.4** Maintain safe and accessible evacuation routes throughout the community; take precautions and ensure backup or mitigations for routes crossing high hazard areas (e.g., flood, seismic, high fire, etc.).

- **PS-11.5** Ensure that the Emergency Operations Plan and Standard Operating Procedures provide for efficient and orderly notification and evacuation on a citywide basis. Ensure they address accessibility issues and mass notification capabilities utilizing our city, county, state, and federal communication systems..

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the implementation of an emergency responder or evacuation plan in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to emergency responder or evacuation plans.

**Impact 5.9-5: Portions of the City and SOI are in Very High Fire Hazard Severity Zones designated by CAL FIRE and could expose structures and residences to fire danger. [Threshold H-7]**

### General Plan

Wildland fires are uncontrolled fires typically in areas of little or no development, but these fires can spread quickly to the urban/wildland interface where development meets expanses of vegetative fuels. Corona is an

interface area where a proactive approach to preventing the start and spread of wildland fire is vital to protecting lives and property.

As shown in Figure 5.20-2, *Very High Fire Hazard Severity Zones,* in Section 5.20, *Wildfire*, portions of the City's northern, western, and southern are designated Very High Fire Hazard Severity Zones. Based on the existing land use map, these areas are predominantly undeveloped, open space, natural open space, agricultural, and single-family residential. Because the proposed General Plan Update would not exceed levels of land use density, intensity, or land use designations beyond what is currently in the 2004 General Plan, these very high fire hazard areas would propose similar uses under the General Plan Update.

Expansive open areas are susceptible to destructive wildland fires, which can be exacerbated by dry weather and Santa Ana winds. Vegetation fuel types in the City include grasses and a variety of brush with low fuel moisture that are highly susceptible to and capable of carrying fire. Notable fires in the last decade include the Holy Fire of 2018; the Canyon Fires of 2017, which burned 2,600 acres in Corona and destroyed 25 structures; and the 2015 Highway Fire, which burned 1,049 acres in Prado Basin.

To help protect the City and its residents from fire hazards, the Corona Fire Department, Fire Prevention Division provides a wide range of services, including the enforcement of local, state, and federally mandated regulations; public education; conducting fire safety inspections; issuing fire code permits, plan checks and new construction inspections, weed abatement and fuel modification; hazardous materials disclosure program; juvenile fire setter intervention program; and the investigation of all fires to determine cause (Corona 2019). As part of the 2019 Building Code adoption process, Corona Fire has amended the Fire Code to require two points of access for all new development and for areas proposing increased residential densities.

In addition, Section 15.16.020 of the Corona Municipal Code designates the Fire Chief to prepare and maintain the City of Corona's map of Very High Fire Hazard Severity Zones in the LRA. As shown in Figure 5.20-2, *Very High Fire Hazard Severity Zones,* these areas match the VHFHSZs designated by CAL FIRE.

The proposed General Plan Update Land Use and Public Safety elements include goals and policies to minimize potential wildfire impacts in Corona. Implementation of LU-10.3, LU-10.4, LU-16.7, LU-22.10, LU-22.14, LU-23.6, and PS-3.3 would reduce impacts to fire through landscaping and design; collaborating with Corona Fire, CAL FIRE, the Forest Service, and local, county, and regional governmental agencies to minimize hazards and provide response; requiring compliance with CBC; allowing emergency responders to use the Corona Municipal Airport; ensuring development does not reduce fire protection services below safe levels; paying impact and demand fees; and evaluating emergency management.

Because the State of California, County of Riverside, and the City of Corona require adherence to building codes and review by the fire department to reduce fire hazards, impacts of fire hazards would be less than significant.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated

by existing and proposed land uses in the City. The CAP would not result in the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires in the City or SOI. Consequently, implementation of the City's CAP would result in less than significant impacts to exposing people or structures to a significant loss, injury, or death involving wildland fires.

## 5.9.5 Existing Regulations and Standard Conditions

### Federal

- Resource Conservation and Recovery Act (RCRA) of 1976
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980
- Superfund Amendments and Reauthorization Act (SARA)
- Emergency Planning and Community Right-to-Know Act (EPCRA)
- Toxic Substances Control Act of 1976
- Occupational Safety and Health Administration (OSHA) Regulation 29 CFR Standard 1926.62

### State

- California Health and Safety Codes Sections 25270.7, 25270.8, and 25507
- Vehicle Code Section 23112.5
- Public Utilities Code Section 7673, (PUC General Orders #22-B, 161)
- Government Code Sections 51018, 8670.25.5 (a)
- Water Codes Sections 13271, 13272,
- California Labor Code Section 6409.1 (b)10
- California Fire Code
- California Building Code
- California Fire Plan
- California Code of Regulations, Title 22, Division 4 and 4.5
- Hazardous Materials Disclosure Programs

### Local

- City of Corona Local Hazard Mitigation Plan
- City of Corona Emergency Operations Plan
- Airport Master Plan
- Corona Standards of Coverage Study and Strategic Fire Plan
- Corona Municipal Code

## 5.9.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.9-1, 5.9-2, 5.9-3, 5.9-4, and 5.9-5.

## 5.9.7 Mitigation Measures

No significant adverse impacts were identified, and no mitigation measures are necessary.

## 5.9.8 Level of Significance After Mitigation

### Impact 5.9-3

No mitigation measures are required, and impacts would remain less than significant.

## 5.9.9 References

Corona, City of. 2019. Fire Prevention and Planning. https://www.coronaca.gov/government/departments-divisions/fire-department/fire-prevention-and-planning

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Office of Statewide Health Policy Development (OSHPD). 2017, July 10. Healthcare Atlas. List of Hospitals in California, USA. http://gis.oshpd.ca.gov/atlas/places/list-of-hospitals.

Riverside County Airport Land Use Commission (RCALUC). 2004, October. Background Data: Corona Municipal Airport and Environs. http://www.rcaluc.org/Portals/13/PDFGeneral/plan/newplan/35-%20Vol.%202%20Corona%20Municipal.pdf

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# 5.10 HYDROLOGY AND WATER QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts of the Corona General Plan Update and Climate Action Plan Update to hydrology and water quality conditions in the City of Corona and its sphere of influence (SOI). Hydrology deals with the distribution and circulation of water, both on land and underground. Water quality deals with the quality of surface- and groundwater. Surface water includes lakes, rivers, streams, and creeks; groundwater is under the earth's surface.

The following analysis is based in part on information obtained from:

- *City of Corona General Plan Update Infrastructure Report for Hydrology, Sewer, Water and Water Quality*, Fuscoe Engineering, Inc., August 24, 2018

A complete copy of this study is included Appendix I to this Draft EIR.

## Terminology

The following are definitions for terms used throughout this section.

- **Best Management Practices (BMPs).** Design features that reduce pollutants in runoff to the City's storm drain system from new development and redevelopment projects.

- **Drainage Area Management Plan (DAMP) and Local Implementation Plans (LIPs).** Under the Riverside County's municipal separate storm water (MS4) NPDES permit, jurisdictions must prepare a DAMP as well as LIPs, which describe the urban runoff management programs for their local jurisdiction.

- **Low Impact Development (LID)** BMPs are BMPs that minimize the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention.

- **Special Flood Hazard Areas (SFHAs)**. The Federal Emergency Management Agency (FEMA) provides Flood Insurance Rate Maps (FIRMs) that delineate flood hazards.

- **National Pollution Discharge Elimination System (NPDES).** The NPDES program addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. NPDES issues two basic permit types: individual and general.

- **Maximum Contaminant Level (MCL)** is the maximum permissible level of a contaminant in water that is delivered to any user of a public water system

- **Storm Water Pollution Prevention Plan (SWPPP).** Under the statewide general NPDES a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must list BMPs implemented on the construction site to protect storm water runoff, and must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if

there is a failure of BMPs; and a monitoring plan if the site discharges directly to a water body listed on the state's 303(d) list of impaired waters.

- **Water Quality Management Plan (WQMP).** Certain significant redevelopment and new development projects are required to prepare a WQMP to address urban runoff water quality issues in the City.

## 5.10.1 Environmental Setting

### 5.10.1.1 REGULATORY FRAMEWORK

#### Federal Laws

##### *Clean Water Act*

The federal Water Pollution Control Act (or Clean Water Act [CWA]) is the principal statute governing water quality. It establishes the basic structure for regulating discharges of pollutants into the waters of the United States and gives the EPA authority to implement pollution control programs, such as setting wastewater standards for industry. The statute's goal is to completely end all discharges and to restore, maintain, and preserve the integrity of the nation's waters. The CWA regulates direct and indirect discharge of pollutants; sets water quality standards for all contaminants in surface waters; and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges; requires states to establish site-specific water quality standards for navigable bodies of water; and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA funds the construction of sewage treatment plants and recognizes the need for planning to address nonpoint sources of pollution. Section 402 of the CWA requires a permit for all point source (a discernible, confined, and discrete conveyance, such as a pipe, ditch, or channel) discharges of any pollutant (except dredge or fill material) into waters of the United States.

##### *National Pollutant Discharge Elimination System*

Under the National Pollutant Discharge Elimination System (NPDES) program (under Section 402 of the CWA), all facilities that discharge pollutants from any point source into waters of the United States must have a NPDES permit. The term "pollutant" broadly applies to any type of industrial, municipal, and agricultural waste discharged into water. Point sources can be publicly owned treatment works (POTWs), industrial facilities, and urban runoff. (The NPDES program addresses certain agricultural activities, but the majority are considered nonpoint sources and are exempt from NPDES regulation.) Direct sources discharge directly to receiving waters, and indirect sources discharge to POTWs, which in turn discharge to receiving waters. Under the national program, NPDES permits are issued only for direct, point-source discharges. The National Pretreatment Program addresses industrial and commercial indirect dischargers. Municipal sources are POTWs that receive primarily domestic sewage from residential and commercial customers. Specific NPDES program areas applicable to municipal sources are the National Pretreatment Program, the Municipal Sewage Sludge Program, Combined Sewer Overflows (CSOs), and the Municipal Storm Water Program. Nonmunicipal sources include industrial and commercial facilities. Specific NPDES program areas applicable

to these industrial/commercial sources are: Process Wastewater Discharges, Non-Process Wastewater Discharges, and the Industrial Storm Water Program. NPDES issues two basic permit types: individual and general. Also, the EPA has recently focused on integrating the NPDES program further into watershed planning and permitting (USEPA 2012).

The NPDES has a variety of measures designed to minimize and reduce pollutant discharges. All counties with storm drain systems that serve a population of 50,000 or more, as well as construction sites one acre or more in size, must file for and obtain an NPDES permit. Another measure for minimizing and reducing pollutant discharges to a publicly owned conveyance or system of conveyances (including roadways, catch basins, curbs, gutters, ditches, man-made channels and storm drains, designed or used for collecting and conveying stormwater) is the EPA's Storm Water Phase II Final Rule. The Phase II Final Rule requires an operator (such as a City) of a regulated small municipal separate storm sewer system (MS4) to develop, implement, and enforce a program (e.g., Best Management Practices [BMPs], ordinances, or other regulatory mechanisms) to reduce pollutants in post-construction runoff to the City's storm drain system from new development and redevelopment projects that result in the land disturbance of greater than or equal to one acre. The City of Corona Public Works Department is the local enforcing agency of the MS4 NPDES permit.

### *Safe Drinking Water Act*

The federal Safe Drinking Water Act (SDWA) regulates drinking water quality nationwide and gives the US Environmental Protection Agency (EPA) the authority to set drinking water standards, such as the National Primary Drinking Water regulations (NPDWRs or primary standards). The NPDWRs protect drinking water by limiting the levels of specific contaminants that can adversely affect public health. All public water systems that provide service to 25 or more individuals must meet these standards. Water purveyors must monitor for contaminants on fixed schedules and report to the EPA when a maximum contaminant level (MCL) is exceeded. MCL is the maximum permissible level of a contaminant in water that is delivered to any user of a public water system. Contaminants include organic and inorganic chemicals (e.g., minerals), substances that are known to cause cancer, radionuclides (e.g., uranium and radon), and microbial contaminants (e.g., coliform and E. coli). The MCL list typically changes every three years as the EPA adds new contaminants or revises MCLs. The California Department of Public Health's Division of Drinking Water and Environmental Management is responsible for implementation of the SDWA in California.

### *Federal Urban Flooding Awareness Act*

In recent years, communities have become concerned with localized flooding. In 2015, Congress passed the Urban Flooding Awareness Act of 2015. Under this bill, the National Academy of Sciences will conduct a study on urban flooding. It defines "urban flooding" as the inundation of property in a built environment, particularly in more densely populated areas, caused by rain falling on increased amounts of impervious surface and overwhelming the capacity of drainage systems. The bill directs the National Academy of Sciences to evaluate the latest research, laws, regulations, policies, best practices, procedures, and institutional knowledge regarding urban flooding. The findings from this assessment will direct future federal policies on identifying, preventing, and mitigating urban flooding.

### *National Flood Insurance Program*

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate the Federal Emergency Management Agency (FEMA) to evaluate flood hazards. FEMA provides Flood Insurance Rate Maps (FIRMs) for local and regional planners to promote sound land use and floodplain development, identifying potential flood areas based on the current conditions. To delineate a FIRM, FEMA conducts engineering studies referred to as Flood Insurance Studies (FISs). The most recent FIS and FIRM was completed and published for City on Date. Using information gathered in these studies, FEMA engineers and cartographers delineate Special Flood Hazard Areas (SFHAs) on FIRMs.

The Flood Disaster Protection Act (FDPA) requires owners of all structures in identified SFHAs to purchase and maintain flood insurance as a condition of receiving federal or federally related financial assistance, such as mortgage loans from federally insured lending institutions. Community members within designated areas are able to participate in the National Flood Insurance Program (NFIP) afforded by FEMA. The NFIP is required to offer federally subsidized flood insurance to property owners in those communities that adopt and enforce floodplain management ordinances that meet minimum criteria established by FEMA. The National Flood Insurance Reform Act of 1994 further strengthened the NFIP by providing a grant program for state and community flood mitigation projects. The act also established the Community Rating System (CRS), a system for crediting communities that implement measures to protect the natural and beneficial functions of their floodplains, as well as managing erosion hazards.

The City of Corona, under NFIP, has created standards and policies to ensure flood protection. These policies address development and redevelopment, compatibility of uses, required predevelopment drainage studies, compliance with discharge permits, enhancement of existing waterways, cooperation with the U.S. Army Corps of Engineers (Corps) and the SBCFCD for updating, and method consistency with the RWQCB and proposed BMPs.

## State Laws

### *Porter-Cologne Water Quality Act*

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water quality control law for California. Under this Act, the State Water Resources Control Board (SWRCB) has ultimate control over state water rights and water quality policy. In California, the EPA has delegated authority to issue NPDES permits to the SWRCB.

### *Storm Water Pollution Prevention Plans*

Pursuant to the CWA, in 2001, the SWRCB issued a statewide general NPDES Permit for storm water discharges from construction sites (NPDES No. CAS000002). Under this Statewide General Construction Activity permit, discharges of storm water from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for storm water discharges or to be covered by the General Permit. Coverage by the General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB and developing and implementing a Storm Water Pollution Prevention Plan (SWPPP). Each

applicant under the General Construction Activity Permit must ensure that a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must list BMPs implemented on the construction site to protect storm water runoff, and must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a monitoring plan if the site discharges directly to a water body listed on the state's 303(d) list of impaired waters.

## Regional Laws

### *Santa Ana Regional Water Quality Control Board*

The state is divided into nine regions related to water quality and quantity characteristics. The SWRCB, through its nine Regional Water Quality Control Boards (RWQCBs) carries out the regulation, protection, and administration of water quality in each region. The City of Corona is under the jurisdiction of the Santa Ana RWQCB.

### *County of Riverside MS4 Permit*

In January 2010, the Santa Ana RWQCB re-issued the Riverside County MS4 Storm Water Permit as Waste Discharge Requirement (WDR) Order R8-2010-0033 (NPDES Permit No. CAS618033) to the County of Riverside, the incorporated cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the Santa Ana Region. Pursuant to the 2010 MS4 Permit, the Co-permittees were required to update and implement a Drainage Area Management Plan (DAMP) for its jurisdiction, as well as Local Implementation Plans (LIPs), which describe the Co-permittees' urban runoff management programs for their local jurisdictions.

### *Santa Ana Basin Plan*

Each RWQCB is required to adopt a Water Quality Control Plan or Basin Plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality conditions and problems. The City of Corona is located in the Santa Ana River Basin, Region 8, in the Upper Santa Ana Watershed. The Water Quality Control Plan for the Santa Ana River Basin (Region 8) was adopted in 1995. This Basin Plan gives direction on the beneficial uses of the state waters within Region 8, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan.

### *Santa Ana Watershed Action Plan*

The Watershed Action Plan for the Santa Ana Watershed Region of Riverside County and its Permittees is a requirement of the Riverside County Municipal MS4 Permit. The purpose of this requirement is to coordinate existing watershed approaches to address water quality and hydromodification impacts resulting from urbanization within the watershed. This requirement is to be achieved by evaluating existing programs relating to the integration of water quality, stream protection, stormwater management, and re-use strategies with land planning policies, ordinances, and plans within each jurisdiction to the maximum extent practicable (MEP). Throughout implementation of the MS4 Permit along with the development of this plan, the Regional Board has emphasized that the plans for each jurisdiction should address cumulative impacts of

development on vulnerable streams; preserve or restore, consistent with the MEP standard, the structure and function of streams; and protect surface water and groundwater quality.

## Local Laws

### *City of Corona Local Implementation Plan*

Under the City's Local Implementation Plan (LIP), land development policies pertaining to hydromodification and low impact development (LID) are regulated for new developments and significant redevelopment projects. The use of LID Best Management Practices (BMPs) in project planning and design is to preserve a site's predevelopment hydrology by minimizing the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention. These land development requirements are detailed in the County-wide Model Water Quality Management Plan (WQMP) and Technical Guidance Document (TGD), approved in May 2011, which cities have incorporated into their discretionary approval processes for new development and redevelopment projects. Within the City's built out system, all runoff ultimately discharges into fully engineered concrete flood control channels. Based on this drainage collection system, projects within the City of Corona are not subject to the hydromodification requirements.

Projects are required to comply with the LID requirements in accordance with the LID hierarchy. The LID hierarchy requires new developments and re-developments to implement BMPs under the LID hierarchy as described in the TGD. The LID hierarchy requires new projects to first infiltrate, then harvest and reuse, then biofilter stormwater runoff from their project site. In the City of Corona, infiltration will likely be incorporated for new projects within the central and southern portions of the City as it is comprised of mostly Type A and B soils which typically have high infiltration rates. Groundwater levels throughout the City ranges from 45 feet to 80 feet below ground level which is also beneficial for infiltration BMP implementation. The eastern and western portions of the City are comprised of mostly Type C & D soils and will likely need infiltration testing to confirm infiltration feasibility. In areas where infiltration is determined to be infeasible, harvest and reuse BMPs may prove feasible for projects that incorporate ample landscaping and/or have high indoor toilet flushing demands (i.e. hotels). For areas that cannot infiltrate or utilize harvest and reuse systems, projects will be able to biofilter stormwater through biofiltration BMPs such as vegetated swales and bioretention basins.

### *Corona Groundwater Management Plan*

A Groundwater Management Plan (GWMP) was prepared for the City of Corona in June 2008. The City of Corona is the water service provider for its constituents, and the GWMP was adopted in accordance with Assembly Bill 3030 to address management for groundwater supply and quality to sustain beneficial uses. The GWMP covers the three groundwater basins that cover the City, including Temescal, Coldwater, and Bedford Basins. The two latter basins (Coldwater and Bedford Basins) make up a portion of the larger Elsinore Basin. Currently, coordinated efforts are required to manage the Coldwater and Bedford Basins between the various agencies with jurisdiction over the area. These agencies that manage the Coldwater and Bedford Basins include the City of Corona, the Temescal Valley Water District (TVWD), while Elsinore Valley Municipal Water District (EVMWD) manages the remainder of the Elsinore Basin outside of the Coldwater and Bedford Basins.

Successful implementation of the Groundwater Management Plan also requires coordinated efforts between local jurisdictions and statewide monitoring of California's groundwater basins. The California Department of Water Resources (DWR) manages the California Statewide Groundwater Elevation Monitoring program which tracks the health and groundwater-level elevations of California's 515 different basins and how to best manage these basins. It also publishes a list of basin prioritization to determine how resources should be allocated to manage various groundwater basins, with the majority of resources directed towards basins with medium and high priority.

### *City of Corona Municipal Code*

The City's Municipal Code addresses hydrology and water quality issues through Chapter 13.27, *Stormwater Management and Discharge Controls*. The purpose of this chapter is to protect the future health, safety and general welfare of the city's citizens by:

1) Reducing pollutants in storm water discharges to the maximum extent practicable;

2) Regulating illicit connections and discharges to the storm drain system; and

3) Regulating non-storm water discharges to the storm drain system.

The enforcement of this chapter is intended to protect and enhance the water quality of city watercourses, water bodies, groundwater, and wetlands in a manner consistent with the Federal Clean Water Act

The Municipal Code addresses floodplain issues through Title 18, *Floodplain Management*. The purpose of this title is to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas. In order to accomplish its purposes, this title includes provisions for:

1) Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities;

2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

3) Controlling the alteration of natural flood plains, stream channels and natural protective barriers which help accommodate or channel flood waters;

4) Controlling filling, grading, dredging and other development which may increase flood damage; and

5) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

### 5.10.1.2 EXISTING CONDITIONS

## Santa Ana Watershed Hydrology

### *Regional Drainage*

The City of Corona resides within the regional Santa Ana River Watershed, a flood control zone monitored by the Santa Ana RWQCB that covers portions of the Counties of Riverside, Orange, and San Bernardino. Within Riverside County, this regional watershed is subdivided into the Santa Ana Sub-watershed (of which the City lies within) and the San Jacinto River Sub-watershed. The Santa Ana Sub-watershed consists of the Santa Ana River and its tributaries and the San Jacinto River Sub-watershed includes the San Jacinto River and its tributaries that overflow into the Santa Ana River only in high volume storm events. Ultimately, all channels converge with the Santa Ana River where downstream ends of the channel travel through Orange County prior to emptying into the Pacific Ocean. Figure 5.10-1, *Hydrology*, identifies the major water features and groundwater basins that underlie the City and SOI in the Santa Ana Watershed.

### *Local Surface Waters*

The Santa Ana Sub-watershed is also further subdivided into smaller sub-watersheds based on major tributary channels that feed into the Santa Ana River. The City lies within two of these smaller sub-watersheds: the Middle Santa Ana River Sub-watershed and the Temescal Wash Sub-watershed. The Middle Santa Ana River Sub-watershed is located in the northwest corner of Riverside County and covers a total tributary area of 170 square miles that generally drains westwards towards the Santa Ana River. Tributaries to this sub-watershed include: Temescal Creek, Tequesquite Arroyo (Sycamore Creek), Day Creek, and San Sevaine Creek. The Temescal Sub-watershed covers 250 square miles and is defined as the tributary area draining into the Temescal Wash, also known as Temescal Creek, that connects Lake Elsinore with the Santa Ana River. Tributaries to the Temescal Wash include Wasson Canyon Wash, Arroyo Del Toro, Stovepipe Canyon Wash, Rice Canyon Wash, and Lee Lake. A majority of Corona lies within this sub-watershed, and the drainage channels that run through the City that tie into the Temescal Wash include Arlington Channel, Main Street Channel, Oak Street Drain, Joseph Canyon Wash, and Bedford Wash.

### *Existing Drainage Facilities*

All the channel reaches within the City in the two sub-watersheds are improved (lined) for flood control and are not subject to hydromodification impacts. The storm drain system within the City is composed of six main storm drain facilities, summarized below.

- Temescal Canyon Wash is the major watercourse and flows northwesterly through the northern half of the City. Temescal Wash joins the Santa Ana River at the site of Prado Dam, a U.S. Army Corps of Engineers flood-control reservoir. This reservoir is located at the northwestern City limits.

- Oak Street Channel traverses generally from the Oak Street Debris Basin northerly across SR-91, and terminates at the Temescal Wash. The channel is generally an open rectangular concrete-lined section with various culvert crossings at the major streets.

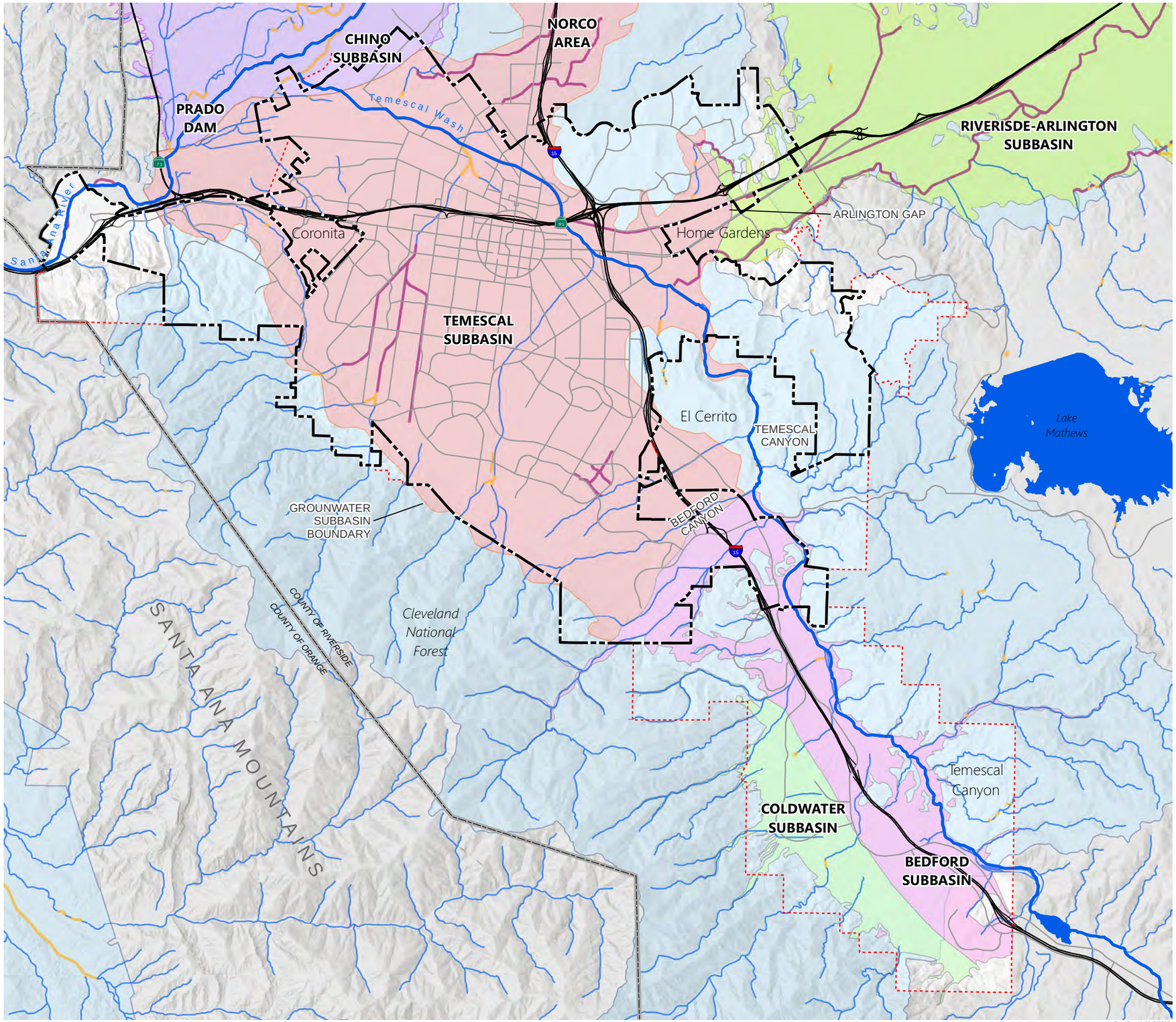


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Figure 5.10-1

# HYDROLOGY

## Legend

- City Boundary
- Sphere of Influence Areas

**Water Features**

- Artificial Drainage Paths
- Canals and Ditches
- Streams and Rivers
- Lake

**Groundwater Basins**

- Bedford Subasin
- Coldwater Subbasin
- Chino Subbasin
- Riverside - Arlington Subbasin
- Temescal Valley Subbasin
- Groundwater Management Plan

*Source:*
*California Department of Water Resources (CDWR). 2016, Bulletin 118 Groundwater Basins Interim Update; United States Geological Survey (USGS) National Hydrography Database, 2017.*

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Miles
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PLACEWORKS

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- Main Street Channel traverses through the southeasterly corner of the City and consists of a concrete lined rectangular channel at the upstream end. It joins the Temescal Wash at Sixth Street.
- Arlington Channel consists of a vertical wall concrete-lined section that flows westerly through the Home Gardens area and joins Temescal Wash near the AT&SF Railroad, north of SR-91.
- South Norco Storm Drain runs from southwest of Norco through Parkridge Avenue at the City limit and terminates at Temescal Wash.
- North Norco Storm Drain enters the City limits at River Road and terminates at Temescal Wash.

Other facilities include the Main, Oak, Mabey basins, the Line 36 storm drain, the Line 7-A storm drain, and the Compton Avenue storm drain. Storm drainpipes range from 12-inch to 102-inch diameter pipes within the City.

### *Groundwater*

The Middle Santa Ana River Groundwater Basin contains twelve management zones: Arlington, Bedford, Coldwater, Elsinore, Lee Lake, Riverside A through F, and Temescal. The City of Corona resides within the Bedford, Coldwater, and Temescal management zones. The Temescal subbasin underlies the southwest part of the upper Santa Ana Valley. The water-bearing materials are dominantly composed of Holocene alluvium deposited by streams draining the northeast slopes of the Santa Ana Mountains. Dominant recharge to the groundwater reservoir is from percolation of precipitation on the valley floor and infiltration of stream flow within tributaries exiting the surrounding mountains and hills. The Bedford subbasin is located south of the Temescal subbasin in Temescal Canyon between the Santa Ana Mountains and the El Sobrante Hills. The Coldwater subbasin is located southwest of the Bedford subbasin and Temescal Wash. The Coldwater and Bedford subbasins are separated by the North Glen Ivy segment of the Elsinore Fault (KWC 2016).

## Water Quality

### *Surface Water Quality*

According to the Santa Ana Region Watershed Action Plan, the channels with existing beneficial uses include the Santa Ana River, Reach 3; Temescal Creek, Reaches 1 and 2; Bedford Canyon Creek; and the Coldwater Canyon Creek.

General water quality objectives have been prescribed in the Santa Ana Basin Plan for all surface waters within the Santa Ana River Region. In order to maintain the beneficial uses inland surface waters must achieve these water quality objectives. Table 5.10-1 shows the numeric objectives that have been established by the Basin Plan for the surface streams within the City of Corona, specifically the Santa Ana River.

Table 5.10-1 Surface Water Numeric Water Quality Objectives

| Water Quality Objective | Numeric objective (mg/L) |
|---|---|
| Boron | 0.75 |
| Total Dissolved Solids | 700 |
| Hardness | 350 |
| Sodium | 110 |
| Chloride | 140 |
| Total Inorganic Nitrogen | 10 |
| Sulfate | 150 |
| Chemical Oxygen Demand | 30 |

Source: Fuscoe 2018.

### *Groundwater*

The Middle Santa Ana River Basin contains 12 management zones: Arlington, Bedford, Coldwater, Elsinore, Lee Lake, Riverside A through F, and Temescal. The City of Corona resides within the Bedford, Coldwater, and Temescal management zones.

The Basin Plan identifies the Riverside County groundwater management zone in the Middle Santa Ana River Basin as having four beneficial uses for the Bedford Basin, Coldwater Basin, and Temescal Basin as shown below:

- MUN – Municipal and Domestic Supply;
- AGR – Agricultural Supply;
- IND – Industrial Service Supply; and
- PROC – Industrial Process Supply.

Specific water quality numeric objectives have been established for the Riverside County groundwater management zones within the City of Corona, specifically the Coldwater Basin and the Temescal Basin to maintain its beneficial uses and are summarized in Table 5.10-2, *Groundwater Basin Water Quality Objectives*.

Table 5.10-2 Groundwater Basin Water Quality Objectives

| Groundwater Management Zone | Total Dissolved Solids Objective (mg/L) | Nitrate (as N) Objective (mg/L) |
|---|---|---|
| Coldwater | 380 | 1.5 |
| Temescal | 770 | 10 |

Table 5.10-3, *Groundwater Basin Existing Water Quality*, shows that groundwater quality from the three basins have similar inorganic chemistry indicating primarily a sodium and calcium-bicarbonate water type. Variability of water type is observed between the three basins and is likely attributed to variations in geology surrounding each of the three basins.

**Table 5.10-3 Groundwater Basin Existing Water Quality**

| | Total Dissolved Solids (mg/L) | | Nitrate (as $NO_3$) (mg/L) | |
|---|---|---|---|---|
| Basin | Range | Average | Range | Average |
| Temescal | 307–1,950 | 894 | 0.3–124 | 41 |
| Bedford | 630 | 630 | 0.4–6.5 | Not available |
| Coldwater | 300–650 | 477 | Not available | Not available |

Source: AKM Consulting Engineers and Todd Engineers 2008.

As shown above in Table 5.10-3, numeric levels of both total dissolved solids and nitrate (as $NO_3$) for Temescal Basin exceed the recommended 500 mg/L TDS for potable water, the recommended 700 mg/L TDS for irrigation use, and 45 mg/L Nitrate (as $NO_3$) for potable water. Note that for Bedford Basin, no average for Nitrate was available. In addition, the Coldwater Basin also did not have any conclusive data available, although one recent sample showed low nitrate concentrations at 1.2 mg/L. Groundwater pumped via City operated wells is blended with imported water to reduce concentration levels to within recommended EPA and California Department of Health Care Service levels.

## Flood and Flood-Related Hazards

Corona's general drainage pattern runs in a northwesterly direction toward the Santa Ana River. Substantial flows reach the mouths of the canyons and then spread out on the alluvial fan formed by several watercourses draining from the mountains. Seasonal rains can be intense, particularly in the foothills, making Corona susceptible to flooding. Most recently, flooding occurred in 1993, 1997, 2005, and 2010 along the Santa Ana River, Prado Dam area, and Corona Municipal Airport. While the City has been spared significant damages, Corona's location in a valley makes it susceptible.

### *Designated Flood Zones*

Corona's flood-prone areas are given two designations. Special Flood Hazard Areas (SFHAs), or the 100-year zone, have a 1 percent chance of flooding in any given year. Figure 5.10-2, *Flood Hazards*, identifies the 100-year and the 500-year flood zones contained in the City as well as the Department of Water Resources (DWR) Awareness Floodplain areas. Northwestern Corona, extending from Prado Dam to the Airport, and westward through Santa Ana Canyon are designated as Flood Zone A, which indicates the area is within a 100-year flood zone or inundated by one percent annual chance flooding. Mabey Canyon Wash and Temescal Creek are also prone to a 100-year flood. A large portion of central Corona is within a "moderate" or 500-year flood zone, with a 0.2 percent chance of flooding in any year. This includes areas around Temescal Wash, Mabey Canyon Wash, Main Street Wash, and the Arlington Channel.

### *Mudflow/Debris Flow*

A mud/debris flow refers to a moving mass of loose mud, sand, soil, rock, and water that travels down a slope under the influence of gravity. A mud/debris flow can also flow down a stream, ravine, canyon, arroyo, or gulch. These flows develop when water rapidly accumulates in the ground during heavy rainfall or rapid snowmelt, changing loose earth into a flowing river of mud. Mud/debris flows can travel miles from the source, growing as they pick up trees, boulders, cars, and other materials. Generally, areas most susceptible to mud/debris flow include steep slopes, landforms subject to erosion, river channels, and hillsides that have been burned by wildfire. Mud/debris flows are most susceptible in areas that front the steeper slopes on the west side of the city fronting the Santa Ana Mountains and Cleveland National Forest. Following the Santa Ana Canyon fires of 2017 and the Holy Fires of 2018, the city experienced mud/debris flows near homes at the base of the Cleveland National Forest, causing voluntary evacuations.

### *Dam Inundation*

Several reservoirs in the General Plan area present a remote risk of downstream inundation if a dam fails as the result of an earthquake or other catastrophic event. Figure 5.10-3, *Dam Inundation Zones*, identifies areas in the City and SOI that are at risk during a catastrophic failure of a dam. The California Governor's Office of Emergency Services (OES) has directed dam operators to delineate areas likely to be inundated in the event of a catastrophic dam failure caused by earthquake or other events. There are two dams within the General Plan area:

- Mabey Canyon Dam
- Prado Dam

Mabey Canyon Dam was constructed in 1974 and has a height of 46 feet. This dam is owned and operated by the Riverside County Flood Control and Water Conservation District (DWR 2017). Prado Dam was constructed in 1941 and has a height of 543 feet; it is owned by Army Corps of Engineers (Army Corps 2019).

The Prado Dam is currently undergoing improvements. The expanded reservoir will create additional flood protection for communities downstream of the dam.

In addition to dams within the City, there are an additional four dams upstream that have inundation zones that reach the City. These dams are:

- Harrison Street Dam
- Lee Lake
- Lake Mathews Dam
- Mockingbird Canyon Dam

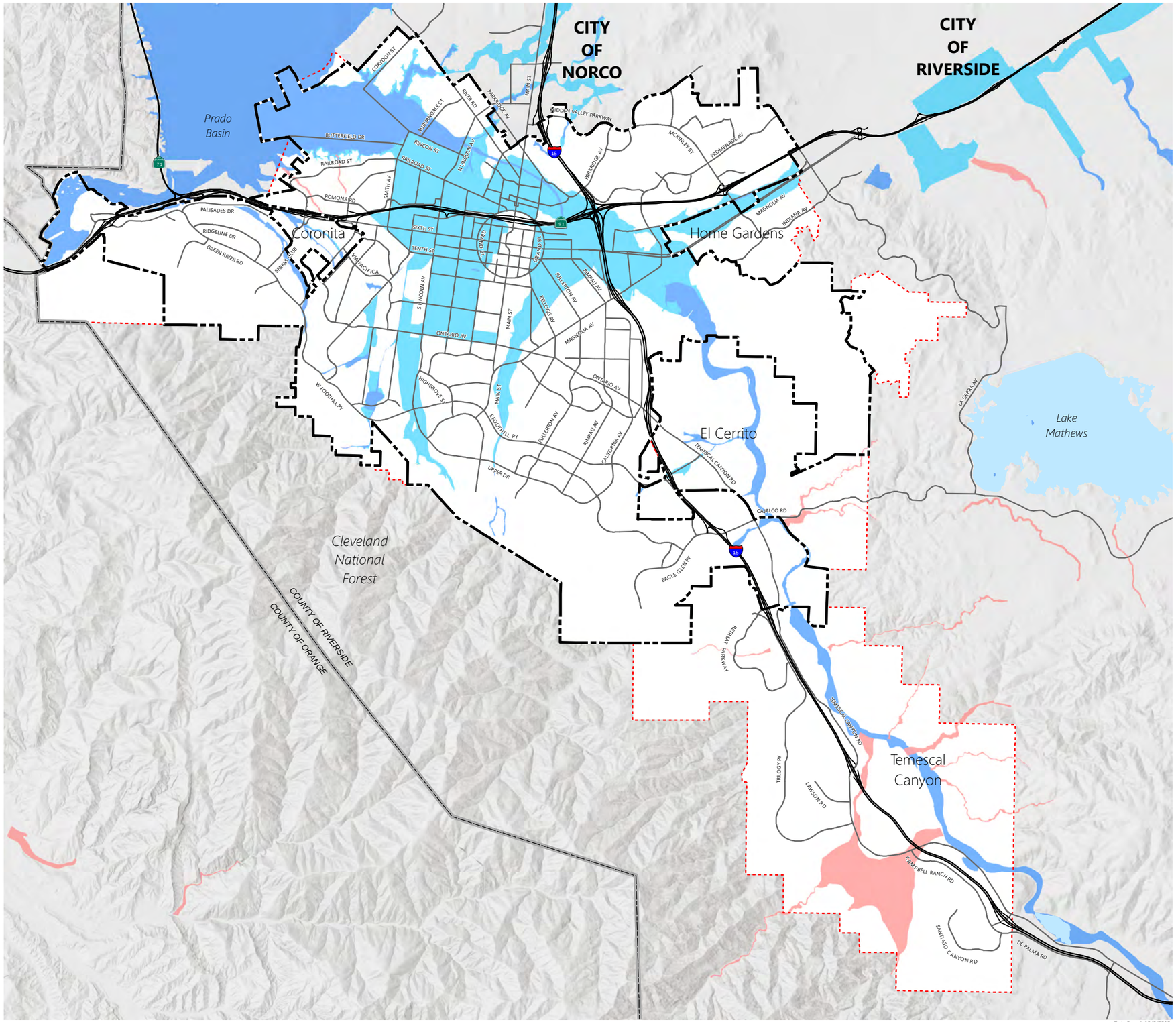


Figure 5.10-2

# FLOOD HAZARDS

## Legend

- City Boundary
- Sphere of Influence Areas
- DWR Awareness Floodplain
- 100-Year Flood Zone
- 500-Year Flood Zone

Notes:
100-year flood zone: Includes areas subject to a 100-year flood as defined by FEMA. This area is also referred to as a special flood harard area.

500-year flood zone: Includes areas between the limits of the 100-year floodplain and subject to a 500-year flood as defined by FEMA. This area is also referred to as a moderate flood hazard area.

DWR Awareness flood zone: Includes areas defined by the California DWR with a potential for a 100-year flood that may warrant further study to assess the risk of flooding.

This map does not have the official status of a FEMA regulatory map.

*Source:*
*Department of Water Resources (DWR, 2016)*
*Federal Emergency Management Agency (FEMA, 2016)*

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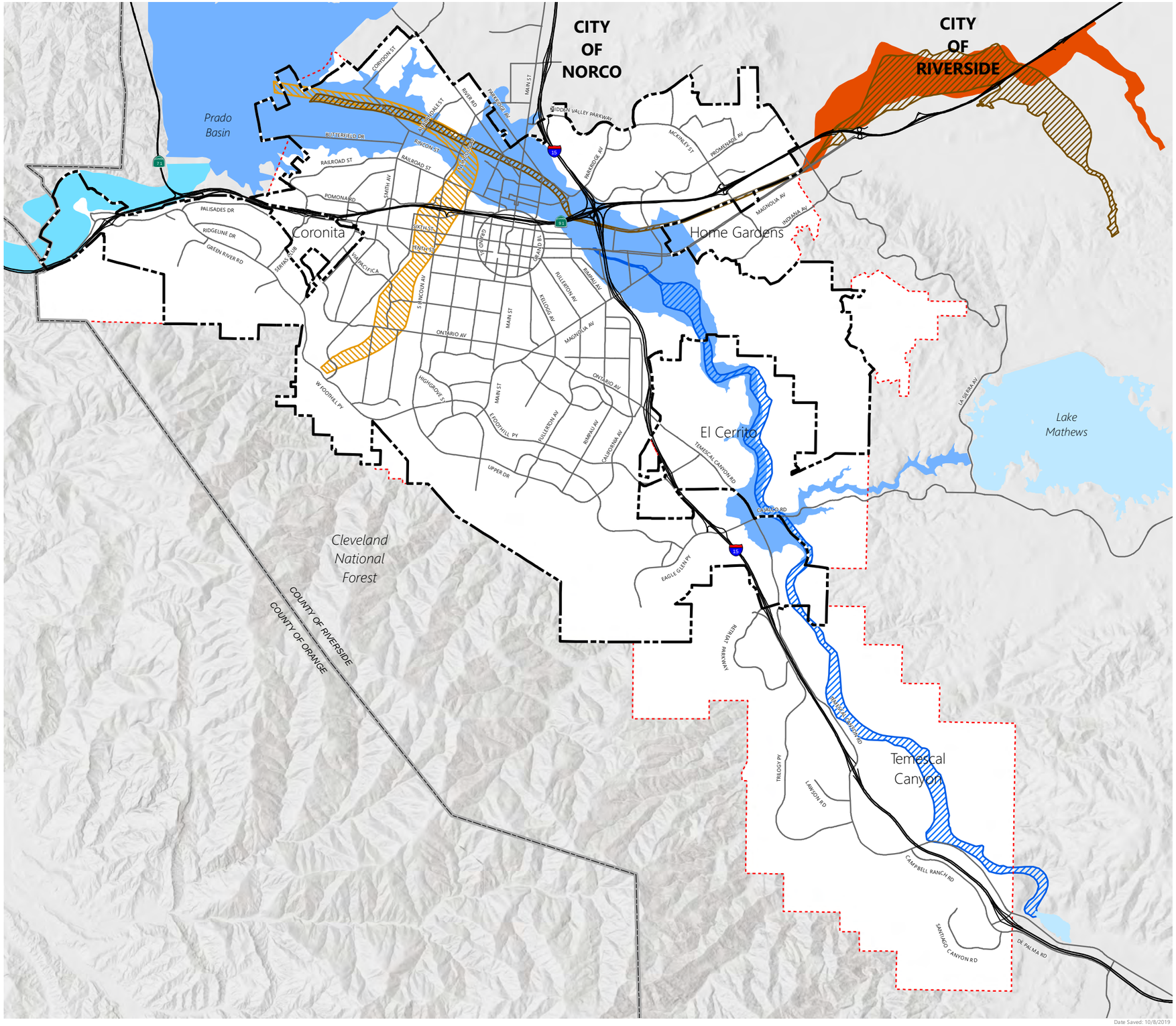


Figure 5.10-3

# DAM INUNDATION ZONES

## Legend

- City Boundary
- Sphere of Influence Areas
- Harrison St.
- Lee Lake
- Maybe Canyon
- Lake Mathews
- Mockingbird Canyon
- Prado

Date Saved: 10/8/2019

*Source:*
*Department of Water Resources, 2015*

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PLACEWORKS

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The inundation zones for the Harrison Street and Mockingbird Canyon dams touch the northeastern edge of the City before being contained by Arlington Channel. The Harrison Street inundation zone then extends along the banks of Temescal Creek until it terminates within Prado Basin. The Lake Mathews inundation zone follows Cajalco Canyon to Temescal Wash, which leads to Prado Basin. The Lee Lake inundation zone follows Temescal Wash before terminating just past the Interstate 15 bridge. All dams must meet safety requirements and are inspected annually by the Division of Safety of Dams of the California Department of Water Resources.

The primary inundation hazard to Corona is Lake Mathews, located seven miles southeast of Corona in the Gavilan Hills. Two dams contain Lake Mathews. Failure of either dam would cause flooding along the Temescal Wash in the eastern and northeastern parts of the city. Should either of the two dams fail, inundation is 40 minutes to Corona city limits and about 65 minutes to the Prado Basin.

### *Tsunamis*

A tsunami is a large ocean wave generated by an earthquake, landslide, or volcanic eruption. The General Plan area is more than 30 miles from the Pacific Ocean and is well outside of the tsunami inundation zone.

### *Seiches*

Seiches are waves that oscillate in enclosed water bodies, such as reservoirs, lakes, and ponds, or semi enclosed bodies of water. Seiches may be triggered by moderate or large submarine earthquakes or sometimes by large onshore earthquakes. Inundation from a seiche can occur if the wave overflows a containment of an artificial body of water. Flooding due to a seiche would occupy less area than the dam inundation zones.

## 5.10.2 Thresholds of Significance

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

HYD-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

HYD-2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

HYD-3 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:

i) Result in substantial erosion or siltation on- or off-site.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.

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.

iv) Impede or redirect flood flows.

HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

HYD-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

## 5.10.3 Relevant General Plan Policies

The following are relevant goals and policies of the Corona General Plan Update, which may reduce potential hydrology and water quality impacts as a result of implementation of the proposed project.

### Land Use Element

#### *Type, Distribution, and Form of Land Uses*

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)

- **LU-1.5** Accommodate land use development in balance with the preservation and conservation of open spaces for recreation, aesthetic relief, natural resource value, and public safety (such as floodways, seismic fault zones, and other).

#### *Community Quality and Sense of Place*

- **LU-6.1** Promote sustainable features in new construction and significant renovations, including the use of locally sourced, recycled, and sustainable-sourced building materials, energy- and water-efficient building design, integrated renewable energy and energy storage systems, and waste minimization during construction.

- **LU-6.2** Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through:

  - Site design—concentration and intermixing of development to minimize vehicular trips and promote walking and building orientation for solar access and heat gain and loss

  - Landscaping—drought-tolerant species, use of recycled water for irrigation, and other purposes

  - Capture of rainwater and re-use on site

- Building design and construction materials—energy-and water efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques

### *Public and Institutional Uses*

- **LU-15.7** Strive to incorporate best practices in sustainability (including water conservation, energy conservation, groundwater filtration, and other similar techniques) into the design and development of public and institutional buildings.

### *Open Spaces*

- **LU-16.1** Accommodate open spaces that can be used for recreation and conserved to protect significant plant and animal habitats and population from the risks of flood, fire, and seismic hazards in accordance with the designations of the land use plan.

- **LU-16.2** Require the dedication of additional open spaces in new residential subdivisions and other applicable development, where necessary, to preserve the natural topography, plant and animal habitats, and flooding and drainage corridors in accordance with subsequent policies of this plan..

### *Opportunity Districts and Sites*

- **LU-20.6** Locate and design development to complement and assure its compatibility with the potential Metropolitan Water District (MWD) water treatment facility, if developed..

## Housing Element

### *Housing Production*

- **H-1.4** Support the development of sustainable projects that reduce demand for water and energy resources, reduce commute times and operational costs, and provide for transit.

## Community Design

### *Trails and Greenways*

- **CD-4.2** New development adjoining open spaces, washes or have the ability to provide pedestrian connections to off-site trails or pathways should be designed to ensure landscape transitions and compatibility with these resources. Such improvements should be designed to provide adequate flood protection for adjoining properties.

## Infrastructure and Utilities Element

### *Water Systems*

- **IU-1.1** Review, evaluate, and update the City's Urban Water Management Plan and related capital improvement programs on a regular basis in order to maintain plans for expansion and improvement of distribution and storage facilities.

- **IU-1.2** Evaluate the adequacy of water infrastructure in areas where intensification of land use is anticipated; coordinate capital improvements planning for all municipal water service infrastructure with the direction, extent, and timing of growth**.**

- **IU-1.3** Construct, upgrade, maintain, and expand water supply, distribution, pumping, storage, and treatment facilities in the Urban Water Management Plan and/or as required to meet state and federal standards.

- **IU-1.4** Designate, preserve, and acquire land, if necessary, for siting future water supply, storage, and distribution facilities in conformity with the goals and policies of the Land Use Element.

- **IU-1.5** As a condition of permit approval, require adequate water supply, distribution, pumping, storage, and treatment facilities to be operational prior to the issuance of building permits.

- **IU-1.6** Achieve and maintain compliance with all federal, state, and local regulatory standards for drinking water to protect the health, safety, and welfare of Corona.

- **IU-1.7** Require all new development to be served from an approved domestic water supply to protect the health and safety of the public and groundwater supplies.

- **IU-1.8** Through engineering design, construction practices, and enforcement of water regulatory standards, ensure that existing and new land uses and development do not degrade the City's surface waters and groundwater supplies.

- **IU-1.9** Require the costs of improvements to the water supply transmission, distribution, pumping, storage, and treatment facilities necessitated by new development be equitably borne by beneficiaries, either through the payment of fees, or construction of the improvements.

### *Water Conservation*

- **IU-2.1** Continue to implement the City's water conservation and reuse efforts; review these programs regularly, and modify them as appropriate and feasible.

- **IU-2.2** Establish guidelines and standards for water conservation and actively promote use of water-conserving devices and practices in new construction, major alterations and additions to existing buildings, and retrofitting of irrigation systems where feasible.

- **IU-2.3** Require incorporation of best available technologies for water conservation, internally and externally, in new construction and associated site design.

- **IU-2.4** Expand the recycled water program to provide water for landscaped medians and other appropriate open spaces along SR-91 and I-15, in coordination with Caltrans when feasible.

- **IU-2.5** Require that sewer flows be minimized in existing and future developments through water conservation and recycling efforts.

- **IU-2.6** Encourage the use of recycled water by industrial, commercial, and institutional users through the use of incentives such as differential pricing; require recycled water use for landscaped irrigation, grading, and other noncontact uses in new projects, where feasible.

- **IU-2.7** Require the use of recycled water for landscaped irrigation, grading, and other noncontact uses in new developments, parks, golf courses, sports fields, and comparable uses, where feasible.

- **IU-2.8** Continue to provide and support public educational efforts to residents, business, and students regarding the importance of water conservation and recycled water use.

- **IU-2.9** Require that grading plans be designed and implemented to reduce stormwater runoff by capturing rainwater onsite and storing on a temporary, short-term basis to facilitate groundwater recharge rather than relying solely on community drainage facilities.

- **IU-2.10** Require the use of rainwater capture and storage facilities, techniques, and improvements in residential and nonresidential developments to further objectives for water conservation.

### *Sewer/Reclaimed Water*

- **IU-3.9** Continue to require all applicable industries/businesses to obtain sewer discharge permits from the City and to comply with the City's Waste Discharge Pretreatment and Source Control Program.

- **IU-3.10** Continue to implement, as appropriate, the requirements of the NPDES and SCAQMD regulations, including requiring the use of Best Management Practices by businesses in the City.

### *Storm Drainage*

- **IU-4.1** Review, evaluate, and regularly update the City's Storm Drainage Master Plan and related capital improvement programs as a basis for the orderly planning, expansion, and improvement of facilities; implement improvements identified in the Drainage Master Plan.

- **IU-4.2** Maintain and upgrade public storm drains and storage control facilities and construct or expand storm drain and flood control facilities to protect people and property from flooding and stormwater runoff. Implement improvements identified in the City's Drainage Master Plan.

- **IU-4.3** Designate, preserve, and acquire land, as necessary, for storm drainage and storage control facilities. As necessary, require the reservation of rights-of-way and easements for designated water-related infrastructure facilities as a condition of project approval**.**

- **IU-4.4** Evaluate the adequacy of stormwater conveyance and storage control facilities in areas where intensification of land use is anticipated to occur; coordinate capital improvements planning for infrastructure with the direction, extent, and timing of growth.

- **IU-4.5** Review development proposals for projects within the City's Sphere of Influence and encourage Riverside County to not approve any project that cannot be accommodated with an adequate drainage system.

- **IU-4.6** Annually review the development charge, acquisition of service charge, and monthly service charges in order to ensure that adequate fees and charges are collected to fund the operation, maintenance, and repair of existing facilities and construction of new facilities**.**

- **IU-4.7** Require adherence to City regulatory stormwater quality measures and, if needed, take necessary enforcement action(s) to eliminate illicit connections and discharges to/from the stormwater system.

- **IU-5.1** Ensure that existing and new development does not directly degrade or indirectly contribute to the degradation of surface waters or the groundwater system.

- **IU-5.2** Reduce pollutant loading through passive treatment systems such as vegetated filter strips, grass swales, and infiltration/ sedimentation areas in suitable open space areas, overland flow channels, and landscaping adjacent to parking lots and streets.

- **IU-5.3** In new developments, minimize the amount of impervious area that is directly connected to piped or channelized drainage systems.

- **IU-5.4** Evaluate any existing environmental degradation or potential degradation from current or planned storm drain and storage control facilities in wetlands or other sensitive environments.

- **IU-5.5** Require that development projects consider the appropriateness of the channelization of stormwater runoff to facilitate its possible capture and reuse for on-site irrigation and other purposes.

- **IU-5.6** Implement environmentally and economically efficient stormwater treatment systems, whenever practical (such as artificial marshland sewer treatment).

- **IU-5.7** Require developers to obtain a NPDES permit prior to moving construction equipment onto a development site. The NPDES permit shall be retained at the construction site throughout the construction period, and a copy shall be filed with the City Engineer.

- **IU-5.8** During construction projects, ensure compliance with all terms and conditions outlined in the NPDES permit, including the implementation of the latest best management practices and determination of need for any additional water quality management plans to reduce pollutants and urban runoff flows to the maximum extent practicable.

- **IU-5.9** Require that new developments employ the most efficient drainage technology to control drainage and minimize damage to environmentally sensitive areas.

- **IU-5.10** Require that individual project owners and operators handle, store, apply, and dispose of all pest control, herbicide, insecticide, and other similar substances according to all federal, state, and local regulations.

## Public Safety Element

### *Flooding and Inundation*

- **PS-2.1** Maintain and continuously update the City's floodplain safety hazards maps and dam inundation maps in concert with FEMA map amendments, improvements to local drainage facilities, and updated flood studies from individual projects or the State of California.

- **PS-2.2** Evaluate, on a project-by-project basis, whether new development should be located in a flood hazard zone and identify and require construction methods or other appropriate methods to minimize the risks of damage for projects located in flood zones.

- **PS-2.3** Require adherence to the California Building Code, Municipal Codes, FEMA flood control guidelines, and Corona Floodplain Management Ordinance for the purposes of avoiding or minimizing the risk of damages to structures, injury, or loss of life.

- **PS-2.4** Locate, when feasible, new essential public facilities outside of flood zones; for those that must remain or are built in flood hazard zones, harden structures to maintain the structural and operational integrity of such public facilities in case of flooding.

- **PS-2.5** Identify vulnerable structures, infrastructure, and utilities in areas of special flood hazards and encourage the retrofit or upgrade of such structures and infrastructure to minimize damages and reduce the risk or injury or death from flooding.

- **PS-2.6** Prohibit the alteration of natural floodplains or improved drainage areas or the allowance of encroachments by structures without determination by the Floodplain Administrator that such actions will not be detrimental to public health and safety.

- **PS-2.7** Establish and maintain cooperative working relationships among public agencies with responsibility for flood protection, including Riverside County Flood Control District, County Public Works, neighboring jurisdictions, and other entities.

## Healthy Community Element

### *Reduction in Pollution Exposure*

- **HC-2.3** Prioritize local and regional efforts, in cooperation with regional agencies, to remediate or treat contaminated surface water, groundwater, or soils to state and federal standards, and ensure that drinking water is safe and healthful to meet all local, state, and federal health standards

- **HC-2.7** Keep up to date on new and amended regulations issued by state and federal regulatory agencies with respect to air, water, and other pollutants and permissible exposure; revise local ordinances and development requirements as needed to reduce exposure to pollution.

### *Public Facilities*

- **HC-5.4** Establish agreements with partner agencies to provide public facilities, services, and amenities within the city. This includes public education, health services, flood protection, energy, technology and communications services, and other services as appropriate.

## Environmental Resources Element

### *Water Resources*

- **ER-1.1** Continually monitor the implementation and enforcement of water quality regulations by appropriate County, state, and federal agencies to prevent additional pollution of the City's hydrologic resources, including aquatic environments, underground water basins, and surface waters.

- **ER-1.2** Require all public and private grading and construction activities to minimize adverse impacts on the City's water resources through the use of best management practices, as established and updated from time to time by the City of Corona.

- **ER-1.3** Implement standard conditions of approval on development and related projects that require appropriate mediation strategies if soil or groundwater contamination is encountered during project grading and construction.

- **ER-1.4** Prohibit the discharge of toxins, debris, refuse, and other contaminants into watercourses, other drainages, water bodies, and groundwater basins. Work with appropriate entities to ensure the cleanup of contamination of existing water resources.

- **ER-1.5** Support the Santa Ana Watershed Project Authority to advance efforts to achieve a watershed that is sustainable, drought-proof, salt-balanced, and capable of providing water resources for multiple benefits for current and future populations.

- **ER-1.6** Provide active leadership in the regional coordination of water resource management and sustainability efforts affecting Riverside County and continue to monitor and participate in, as appropriate, regional activities to ensure a long-term reliable and sustainable supply of water.

- **ER-1.7** Support efforts to create additional water storage and facilities where needed, in cooperation with federal, state, and local water authorities. Additionally, support and/or engage in water banking in conjunction with these agencies where appropriate and as needed.

- **ER-2.1** Sustain the quantity and quality of surface water and groundwater resources within the City of Corona and its sphere of influence for present and future uses.

- **ER-2.2** Balance consideration of water supply requirements between urban, agricultural, and environmental needs so that sufficient supply is available to meet each of these different demands.

- **ER-2.3** Implement water conservation through a wide range of regulations, public and business education, fiscal techniques, and implementing programs.

- **ER-2.4** Require the use of water conservation features and materials in the design and construction of all public buildings, projects, and site development while encouraging their use citywide.

- **ER-2.5** Require the use of reclaimed water in outdoor common areas and landscape treatments for homeowners associations, public facilities, commercial and industrial uses where feasible.

- **ER-2.6** Provide ample opportunities to educate the public and businesses about the importance of water conservation, and the devices available for conservation purposes.

- **ER-2.7** Promote resources that offer incentives for property owners and businesses to install and upgrade water efficient fixtures in their buildings, equipment, and landscaping. devices.

- **ER-2.8** Provide active leadership in the regional coordination of water resource management and sustainability efforts affecting Riverside County and continue to monitor and participate in, as appropriate, regional activities to ensure a long-term reliable and sustainable supply of water.

- **ER-2.9** Support efforts to create additional water storage where needed, in cooperation with federal, state, and local water authorities. Additionally, support and/or engage in water banking in conjunction with these agencies where appropriate and as needed.

- **ER-3.1** In cooperation with RCFCWCD, participate in development, maintenance, and implementation of facilities and programs to recharge City aquifers underlying the City and SOI.

- **ER-3.2** Incorporate natural drainage systems (vegetated swales, small ponds, etc.) into developments, where appropriate and feasible, that offer opportunities for groundwater recharge.

- **ER-3.3** Retain stormwater and runoff at or near the site of generation for percolation into the aquifer to conserve it for future uses and to mitigate adjacent flooding.

- **ER-3.4** Use natural approaches to managing streams (such as nonchannelization strategies, soft-bottom streams, native vegetation, etc.), to the maximum extent possible, where groundwater recharge is likely to occur.

- **ER-3.5** Cooperate with groundwater sustainability members to jointly pursue projects that will contribute to the long-term sustainability (recharge and safe yield) of the basins underlying Corona and SOI areas.

- **ER-3.6** Manage the City's reliance on imported water supplies, to the extent feasible and practical, through an enhanced focus on water conservation, groundwater recharge, and reclaimed water use.

- **ER-4.1** Require urban uses to have a sufficient distance from a floodway boundary to ensure adequate protection of life, property, and habitat values.

- **ER-4.2** Avoid altering floodways or channelization wherever possible; however, limit alterations to those that meet the following criteria:

  - Alterations necessary for the protection of public health and safety only after all other options are exhausted

  - Alterations essential to public service projects where no other feasible construction method or alternative project location exists

  - Projects where the primary function is the improvement of fish and wildlife habitats

- **ER-4.3** Design alterations and improvements to floodways so that they avoid adverse environmental effects to the maximum extent feasible, considering the following environmental factors:

  - Stream scour

  - Erosion protection and sedimentation

  - Wildlife habitat and linkages

  - Groundwater recharge capability

  - Adjacent property

  - Natural designs (e.g., soft riparian bottoms and gentle bank slopes, and landscaping with native plants

- **ER-4.4** Preserve and enhance existing native riparian habitat and prevent obstruction of natural watercourses to the extent feasible in new private and public developments or implement on-site replacement as mitigation.

- **ER-4.5** Allow variances from city development standards on land area restricted from development due to its retention as a natural floodway, floodplain, or watercourse to encourage the preservation of natural watercourses without creating undue hardship on property owners.

- **ER-5.1** Prohibit encroachment of development into wetlands; provide buffer zones, setbacks, or other effective techniques in project siting and design to minimize direct and indirect effects to wetland habitats.

- **ER-5.2** During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.

- **ER-5.3** Ensure compliance with habitat mitigation plans accepted by the applicable state and federal regulatory agencies that meet established ratios for wetland enhancement/restoration and on-/off-site compensation for the loss of wetland functions and values.

- **ER-5.4** Consider wetlands for use as natural water treatment areas that will result in improvement of water quality.

- **ER-5.5** Prohibit the planting of invasive, nonnative species in areas that would encroach and affect watercourses, their banks, and riparian areas.

## 5.10.4 Environmental Impacts

The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.10-1: Development pursuant to the General Plan would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. [Threshold HYD-1]**

### General Plan Update

Urban runoff resulting from storms or nuisance flows (runoff during dry periods) from development projects can carry pollutants to receiving waters. Runoff can contain pollutants such as oil, fertilizers, pesticides, trash, soil, and animal waste. This runoff can flow directly into local streams or lakes or into storm drains and continue through pipes until it is released untreated into a local waterway and eventually the ocean. Untreated stormwater runoff degrades water quality in surface waters and groundwater and can affect drinking water, human health, and plant and animal habitats.

#### *Construction Activities*

Clearing, grading, excavation, and construction activities associated with buildout of the General Plan Update may impact water quality due to sheet erosion of exposed soils and subsequent deposition of particulates in local drainages. Grading activities lead to exposed areas of loose soil and sediment stockpiles that are susceptible to uncontrolled sheet flow. Although erosion occurs naturally in the environment, primarily from weathering by water and wind action, improperly managed construction activities can lead to substantially accelerated rates of erosion that are considered detrimental to the environment.

Both State and local regulations effectively mitigate construction stormwater runoff impacts from the buildout associated with the General Plan Update. The City of Corona's grading ordinance contains expanded requirements for grading, site erosion control, and NPDES requirements. This ordinance affects all grading construction sites of any size. In addition, development of projects resulting in one acre or greater of soil disturbance are required to comply with the Construction General Permit (CGP) and associated local NPDES regulations to ensure that the potential for soil erosion is minimized on a project by project basis. In accordance with the most recent CGP (Order No. 2009-0009- DWQ), the following Permit Registration Documents are required to be submitted to the SWRCB prior to commencement of construction activities:

- Notice of Intent (NOI)
- Risk Assessment (Standard or Site-Specific)
- Particle Size Analysis (if site-specific risk assessment is performed)
- Site Map
- SWPPP
- Post-Construction Water Balance Calculator
- Active Treatment System (ATS) Design Documentation (if ATS is determined necessary)
- Annual Fee & Certification

The project specific SWPPP(s) are required to be prepared in accordance with the site-specific sediment risk analyses based on the grading plans. The SWPPP must describe construction BMPs that address pollutant source reduction, and provide measures/controls necessary to mitigate potential pollutant sources. These include, but are not limited to:

- Erosion controls
- Sediment controls
- Tracking controls
- Non-storm water management
- Materials and waste management
- Good housekeeping practices

In addition to existing regulations that control and minimize pollutants from construction activities, the General Plan Update includes several policies that ensure that new development minimizes potential water quality impacts including:

- **ER-1.2** Require all public and private grading and construction activities to minimize adverse impacts on the City's water resources through the use of best management practices, as established and updated from time to time by the City of Corona.

- **ER-1.3** Implement standard conditions of approval on development and related projects that require appropriate mediation strategies if soil or groundwater contamination is encountered during project grading and construction.

- **ER-7.1** Require that public and private construction activities be conducted in a manner to minimize adverse impacts on natural resources and biological resources through the use of best management practices established by the City of Corona and appropriate county, regional, state, and federal regulatory agencies.

- **IU-1.8** Through engineering design, construction practices, and enforcement of water regulatory standards, ensure that existing and new land uses and development do not degrade the City's surface waters and groundwater supplies.

- **IU-5.7** Require developers to obtain a NPDES permit prior to moving construction equipment onto a development site. The NPDES permit shall be retained at the construction site throughout the construction period, and a copy shall be filed with the City Engineer.

- **IU-5.8** During construction projects, ensure compliance with all terms and conditions outlined in the NPDES permit, including the implementation of the latest best management practices and determination of need for any additional water quality management plans to reduce pollutants and urban runoff flows to the maximum extent practicable.

### *Operational Phase*

Development resulting from the Corona General Plan Update may result in long-term impacts to the quality of stormwater and urban runoff, subsequently impacting downstream water quality. Developments pursuant to the General Plan Update could potentially create new sources for runoff contamination through changing land uses. Consequently, implementation of the General Plan Update may have the potential to increase the post-construction pollutant loadings of certain constituent pollutants associated with the proposed land uses and their associated features, such as landscaping and plaza areas.

To help prevent long-term impacts associated with land use changes and in accordance with the requirements of the City of Corona's Municipal Code Chapter 13.7, *LIP*, and the Riverside County MS4 permit, new development and significant redevelopment projects must incorporate LID/site design and source control BMPs to address post-construction storm water runoff management. In addition, projects that are identified as priority projects are required to implement site design/LID and source control BMPs applicable to their specific priority project categories, as well as implement treatment control BMPs where necessary. Selection of LID and additional treatment control BMPs is based on the pollutants of concern for the specific project site and the BMPs' ability to effectively treat those pollutants in consideration of site conditions and constraints. Further, both priority and nonpriority projects must develop a project-specific Water Quality Management Plan (WQMP) that describes the menu of BMPs chosen for the project, as well as include operation and maintenance requirements for all structural and any treatment control BMPs.

Future project specific WQMPs, preliminary and/or final, will be prepared consistent with the prevailing terms and conditions of the City LIP, and Model WQMP at the time of project application. Moreover, LID and water quality treatment solutions prescribed in project specific WQMPs shall be designed to support or enhance the regional BMPs and efforts implemented by the City as part of their City and SOI-wide efforts to improve water quality.

In accordance with the MS4 Permit, the use of LID features will be consistent with the prescribed hierarchy of treatment provided in the Permit: infiltration, evapotranspiration, harvest/reuse and biotreatment. For those areas of the site where LID features are not feasible or do not meet the feasibility criteria, treatment control BMPs with biotreatment enhancement design features will be utilized to provide treatment. Where applicable, LID features will be analyzed to demonstrate their ability to treat portions of the required design capture volume (DCV) and reduce the size of downstream on-site treatment control BMPs.

Furthermore, as part of the state-wide mandate to reduce trash within receiving waters, the City of Corona and its SOI is required to adhere to the requirements of the amended trash total maximum daily load (TMDL). The requirements include the installation and maintenance of trash screening devices at all public curb inlets, grate inlets and catch basin inlets. The trash screening devices must be approved by the local agency and consistent with the minimum standards of the trash TMDL. The City of Corona has selected Track 1 as its compliance option. By selecting Track 1, the City has agreed to install, operate, and maintain full capture systems in storm drains that capture runoff from one or more priority land use areas.

New industrial (manufacturing and processing) are also required to file a General Industrial Permit with the state and prepare a SWPPP that addresses operational features to control stormwater pollutants and monitoring and reporting requirements.

In addition to existing regulations that control and minimize pollutants from operation of development project in the City, the General Plan Update includes several policies that ensure that new development minimizes potential water quality impacts including:

- **IU-4.7** Require adherence to City regulatory stormwater quality measures and, if needed, take necessary enforcement action(s) to eliminate illicit connections and discharges to/from the stormwater system.

- **IU-5.1** Ensure that existing and new development does not directly degrade or indirectly contribute to the degradation of surface waters or the groundwater system.

- **IU-5.2** Reduce pollutant loading through passive treatment systems such as vegetated filter strips, grass swales, and infiltration/ sedimentation areas in suitable open space areas, overland flow channels, and landscaping adjacent to parking lots and streets.

- **IU-5.3** In new developments, minimize the amount of impervious area that is directly connected to piped or channelized drainage systems**.**

- **IU-5.4** Evaluate any existing environmental degradation or potential degradation from current or planned storm drain and storage control facilities in wetlands or other sensitive environments.

- **IU-5.5** Require that development projects consider the appropriateness of the channelization of stormwater runoff to facilitate its possible capture and reuse for on-site irrigation and other purposes.

- **IU-5.6** Implement environmentally and economically efficient stormwater treatment systems, whenever practical (such as artificial marshland sewer treatment).

- **IU-5.7** Require developers to obtain a NPDES permit prior to moving construction equipment onto a development site. The NPDES permit shall be retained at the construction site throughout the construction period, and a copy shall be filed with the City Engineer.

- **IU-5.8** During construction projects, ensure compliance with all terms and conditions outlined in the NPDES permit, including the implementation of the latest best management practices and determination of need for any additional water quality management plans to reduce pollutants and urban runoff flows to the maximum extent practicable.

- **IU-5.9** Require that new developments employ the most efficient drainage technology to control drainage and minimize damage to environmentally sensitive areas.

- **IU-5.10** Require that individual project owners and operators handle, store, apply, and dispose of all pest control, herbicide, insecticide, and other similar substances according to all federal, state, and local regulations, insecticide, and other similar substances according to all federal, state, and local regulations.

With the implementation of federal, State, local regulations, and the goals and policies of the General Plan Update, runoff from both the operational and construction phases of development pursuant to the General Plan Update would not violate any water quality standards or waste discharge requirements, and impacts would be less than significant.

### Climate Action Plan

The update to the City's Climate Action Plan (CAP) focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or intensity allowed by the proposed Land Use Plan. Consequently, implementation of the CAP would result in less than significant impacts to hydrology and water quality.

**Impact 5.10-2: Buildout of the General Plan would generate a substantial increase in water demand but would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin. [Threshold HYD-2]**

### General Plan Update

The Corona General Plan Update area relies on local groundwater resources for approximately 40 percent of its water supply. Therefore, increases in population could generate a higher demand for groundwater resources. However, the City of Corona updates its urban water management plan (UWMP) every five years, quantifying existing and projected water supplies and demands to ensure there will not be any water supply shortages or significant groundwater depletion. The 2015 UWMP highlighted sufficient surface and

underground water supplied through 2040 concluding no risk of a net deficit in aquifer volume or lowering of the groundwater table. The General Plan Update does not contain any changes to the underlying land use designations that were evaluated in the 2015 UWMP; and therefore, implementation of the General Plan would not substantially decrease groundwater supplies or recharge.

Furthermore, the City prepared a groundwater management plan in 2008 to assist with sustainably operating the Temescal Basin, Bedford Basin, and Coldwater Basin and increasing the reliability of the water supply. The City prepared a Recharge Master Plan for the Temescal Basin in 2013. The Recharge Master Plan lays out a series of tasks that the City is currently implementing:

- Define goals for artificial recharge and develop planning criteria.
- Characterize potential source waters for artificial recharge.
- Characterize the potential sites for artificial recharge.
- Develop alternatives for artificial recharge.
- Evaluate and rank alternatives for artificial recharge.

The City and EVMWD have entered into an agreement regarding the cooperative management of the Coldwater Basin. The agreement assigns an operating committee with the primary purpose of ensuring that the City and EVMWD are allowed to pump sufficient water from the Coldwater Basin to meet their respective requirements and to maximize the sustainable use of the basin. The committee annually determines the amount of groundwater that can be safely extracted from the basin.

Furthermore, the DWR released its final list of critically overdrafted basins in January 2016. The list did not include the Temescal Basin, the Coldwater Basin, or the Bedford Basin. The Temescal Basin and Coldwater Basin are managed to prevent critical overdraft. The City has implemented the Recharge Master Plan for the Temescal Basin, and projects are underway to increase the volume of tertiary-treated reclaimed water available for recharge and to increase the number and capacity of recharge basins. According to the Recharge Master Plan, the Temescal Basin is currently in overdraft; however, the rate of overdraft is decreasing as a result of plan implementation. Per the Fourth Annual Report of the Coldwater Basin Operating Committee, groundwater storage is increasing. This confirms the estimate of the Native Safe Yield and monitoring of artificial recharge. The Coldwater Basin is not in overdraft (KWC 2016).

In addition, the City of Corona requires adherence to the Water Efficient Landscape Ordinance and latest building code requirements for installation of new plumbing fixtures to improve water efficiency for new development projects. As a result, new construction is becoming increasingly more water efficient. Through the Municipal Code, the City of Corona also implements additional water conservation measures in the event of a drought.

Additionally, the General Plan Update includes several goals and policies that decrease the demand for potable water in the City including:

- **Goal ER-2** Sustainable use of finite water resources for the long-term use of residents, the business community, and visitors of Corona. (Policies ER-2.2 through ER-2.9)

- Goal ER-3 Long-term groundwater sustainability of the local water supply for domestic, commercial, industrial, agricultural, environmental protection, and other purposes. (Policies ER-3.1 through ER3.6)
- ER-5.5 Prohibit the planting of invasive, nonnative species in areas that would encroach and affect watercourses, their banks, and riparian areas.

With the implementation of federal, State, local regulations, and the policies of the General Plan Update buildout of the General Plan would not decrease groundwater supplies or interfere substantially with groundwater recharge and impacts would be less than significant.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or intensity allowed by the proposed Land Use Plan. Consequently, implementation of the CAP would result in less than significant impacts to hydrology and water quality.

**Impact 5.10-3: Development pursuant to the General Plan would increase the amount of impervious surfaces and therefore could alter drainage patterns, but would not increase the potential for erosion and siltation on or offsite or create runoff water that would exceed the capacity of storm drain systems or provide substantial additional sources of polluted runoff. [Thresholds HYD-3 (i), (ii), and (iii)]**

### General Plan Update

Development within the General Plan area and the change in land uses will result in an increase in impervious surfaces. This could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause erosion or sedimentation in drainage swales and streams. Increased runoff volumes and velocities could create nuisance flooding in areas without adequate drainage facilities or increase the pollutant load to storm drain systems.

Under the existing conditions and proposed conditions, drainage patterns will largely be maintained and will utilize the existing drainage facilities within the public right-of-way. Current runoff is captured and conveyed by existing storm drain infrastructure in the City and SOI and is eventually discharged into the Santa Ana River. The 2003 update of the City of Corona Drainage Master Plan identified a number of deficient segments throughout the City's service area that were marked for improvement. The City is monitoring its storm drain system for any segments that need immediate improvements and will be updating its Drainage Master Plan to adequately plan for future drainage needs, especially within the remaining undeveloped areas. As the City addresses more of the noted improvement projects, flooding risks will be alleviated.

Under the proposed condition, overall drainage patterns, flow rates, and flow volumes will be maintained based on the high level of impervious condition under the existing condition and will not increase the opportunity for erosion or scour downstream. Hydromodification requirements and standard flood control requirements for new development will minimize impacts of increased flows and volumes on downstream

receiving waters. On-site storm drain systems will likely change with the individual project components but will still utilize the existing city and county facilities within the public right-of-way. Implementation of the proposed land uses within future redevelopment areas will not result in increases in surface water peak flows or volumes over the existing conditions and will likely result in reduced discharges due to on-site water quality and LID features. Implementation of the proposed land use changes within undeveloped areas will likely result in increased runoff, but discharges will be required to remain within the parameters defined by the most current Master Plan of Drainage or site-specific watershed study.

As identified above, the General Plan Update includes several policies that ensure that new development minimizes erosion and siltation and reduces impacts to the stormwater system (Policies IU-5.1 through 5.9).With the implementation of these measures, any impacts to the stormwater system capacity would be less than significant.

Furthermore, the County of Riverside and City of Corona require as a standard condition of approval that all new development or significant redevelopment projects complete drainage and hydrology analyses to ensure that on- and off-site drainage facilities can accommodate increased stormwater flows. Implementation of these provisions, which include LID design, BMPs, and possibly on-site retention basins, would minimize increases in peak flow rates or runoff volumes. All new development or significant redevelopment project applicants would also be required to prepare a WQMP for submittal to the City of Corona's Department of Public Works that describes the BMPs and site design measures that will be implemented to minimize storm runoff from the sites.

Future development in the General Plan area would involve construction activities that could increase the potential for erosion and/or siltation. However, none of the future development would alter the course of an existing stream or river. Standard erosion control measures would be implemented as part of the SWPPP for any proposed project to minimize the risk of erosion or sedimentation during construction. The SWPPP must include an erosion control plan that prescribes measures such as phasing grading, limiting areas of disturbance, designating restricted-entry zones, diverting runoff from disturbed areas, protective measures for sensitive areas, outlet protection, and provisions for revegetation or mulching. The erosion control plan would also include treatment measures to trap sediment, including inlet protection, straw bale barriers, straw mulching, straw wattles, silt fencing, check dams, terracing, and siltation or sediment ponds.

As identified above, the General Plan Update includes several policies that ensure that new development minimizes potential water quality impacts during construction (Policies ER-1.2 and ER-1.3, ER-7.1, IU-1.8, IU-5.7 and IU-5.8).

With implementation of these measures during the construction and operational phases of future development, any erosion, siltation, or polluted runoff impacts would be less than significant.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or

intensity allowed by the proposed Land Use Plan. Consequently, implementation of the CAP would result in less than significant impacts to hydrology and water quality.

**Impact 5.10-4: Portions of the General Plan area proposed for development are located within flood zones or dam inundation areas but the proposed project would not impede or redirect flood flows. [Threshold HYD-3 (iv)]**

## General Plan Update

### *Dam Inundation Areas*

According to Figure 5.10-3, portions of the project area are within the dam inundation zones of the Prado, Mabey Canyon, Harrison Street, Lee Lake, Lake Mathews, and Mockingbird Canyon dams. Table 5.10-4, *Reservoir Inundation Hazards*, lists each dam with a high hazard rating that would cause significant damage in Corona.

Table 5.10-4 Reservoir Inundation Hazards

| National ID | Dam / Reservoir | Year Built | Storage Capacity (Acre-Feet) | Hazard Rating[1] |
|---|---|---|---|---|
| CA01103 | Mabey Canyon | 1974 | 68 AF | High |
| CA10022 | Prado Dam | 1941 | 295,581 AF | High |
| CA00797 | Harrison Street | 1954 | 208 AF | High |
| CA00212 | Lake Matthews | 1938 | 182,000 AF | Ext. High |
| CA00305 | Mockingbird Canyon | 1914 | 1,250 AF | High |
| CA01179 | Oak Street | 1979 | 138 AF | High |

[1] A dam is considered a "high" hazard potential if it stores more than 1,000 acre-feet of water, is higher than 150 feet tall, and has the potential for downstream property damage and/or evacuation.

The primary inundation hazard to Corona is Lake Mathews, located seven miles southeast of Corona in the Gavilan Hills. Two dams contain Lake Mathews. Failure of either dam would cause flooding along the Temescal Wash in the eastern and northeastern parts of the city. Should either of the two dams fail, inundation is 40 minutes to Corona city limits and about 65 minutes to the Prado Basin.

The probability of dam failure is extremely low, and the City of Corona has never been impacted by a major dam failure. Dams in California are continually monitored and inspected by various governmental agencies, including the California Division of Safety of Dams. Dam owners are required to maintain Emergency Action Plans (EAPs) that include procedures for damage assessment and emergency warnings, and the County addresses the possibility of dam failure in the Safety Element of its General Plan.

In addition, the City's General Plan includes the following policies to minimize hazards:

- **PS-2.2** Evaluate, on a project-by-project basis, whether new development should be located in a flood hazard zone and identify and require construction methods or other appropriate methods to minimize the risks of damage for projects located in flood zones.

- **PS-2.7** Establish and maintain cooperative working relationships among public agencies with responsibility for flood protection, including Riverside County Flood Control District, County Public Works, neighboring jurisdictions, and other entities.

### *FEMA Flood Zone*

As shown in Figure 5.10-2, northwestern Corona from Prado Dam to the Airport and westward through Santa Ana Canyon is within a 100-year flood zone. Mabey Canyon Wash and Temescal Creek are also prone to a 100-year flood. Areas around Temescal Wash, Mabey Canyon Wash, Main Street Wash, and the Arlington Channel are within a 500-year flood zone. All new development would be required to meet federal floodplain regulations, including that the lowest floor of the structure is raised above the 100-year base flood elevation. This would ensure that future developments do not impede or redirect flood flows in a manner that would indirectly and adversely impact surrounding uses. Flood insurance would also be required.

Furthermore, the City's Municipal Code Title 18, Floodplain Management, minimizes public and private losses due to flood conditions in specific areas by restricting or prohibiting uses that result in damaging increases in flood heights or velocities. The code also requires that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. The code controls the alteration of natural floodplains, stream channels, and natural protective barriers that help accommodate or channel flood waters, and prevents or regulates the construction of flood barriers that will unnaturally divert floodwaters or may increase flood hazards in other areas. The code also controls filling, grading, dredging, and other development that may increase flood damage.

In addition, the General Plan Update includes several policies that would reduce impacts from flooding and dam inundation:

- **PS-2.2** Evaluate, on a project-by-project basis, whether new development should be located in a flood hazard zone and identify and require construction methods or other appropriate methods to minimize the risks of damage for projects located in flood zones.

- **PS-2.3** Require adherence to the California Building Code, Municipal Codes, FEMA flood control guidelines, and Corona Floodplain Management Ordinance for the purposes of avoiding or minimizing the risk of damages to structures, injury, or loss of life.

- **PS-2.4** Locate, when feasible, new essential public facilities outside of flood zones; for those that must remain or are built in flood hazard zones, harden structures to maintain the structural and operational integrity of such public facilities in case of flooding.

- **PS-2.5** Identify vulnerable structures, infrastructure, and utilities in areas of special flood hazards and encourage the retrofit or upgrade of such structures and infrastructure to minimize damages and reduce the risk or injury or death from flooding.

- **PS-2.6** Prohibit the alteration of natural floodplains or improved drainage areas or the allowance of encroachments by structures without determination by the Floodplain Administrator that such actions will not be detrimental to public health and safety.

- **PS-2.7** Establish and maintain cooperative working relationships among public agencies with responsibility for flood protection, including Riverside County Flood Control District, County Public Works, neighboring jurisdictions, and other entities.

With the implementation of these policies, in addition to federal, state, and local regulations, future development pursuant to the General Plan Update would not impede or redirect flood flows, and impacts would be less than significant.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or intensity allowed by the proposed Land Use Plan. Consequently, implementation of the CAP would result in less than significant impacts to hydrology and water quality.

**Impact 5.10-5: The proposed project would not result in flood hazards associated with flood zones, tsunami, or seiche zones, or due to dam inundation. [Threshold HYD-4]**

### General Plan Update

#### *Flood Zones*

The General Plan Update includes several policies that ensure that new development minimizes potential water quality impacts during construction (Policies ER-1.2 and ER-1.3, ER-7.1, IU-1.8, IU-5.7 and IU-5.8) and operation (Policies IU-5.1 through 5.9). As discussed in Impact 5.10-4, with the implementation of General Plan Update policies and federal, State, and local regulations, future development pursuant to the General Plan Update would not release pollutants due to inundation, and impacts would be less than significant.

#### *Seiche*

Released water from a seiche would result in much smaller footprints than the dam inundation zones, and the probability of this occurring is extremely low. In the rare chance that a seiche does occur, the seiche would flow into the dam inundation zones, as illustrated on Figure 5.10-3, *Dam Inundation Zones*.

As discussed in Impact 5.10-4, with the implementation of General Plan Update policies and federal, State, and local regulations, future development pursuant to the General Plan Update would not release pollutants due to seiches, and impacts would be less than significant.

### *Tsunami*

The General Plan area is more than 30 miles from the Pacific Ocean and is well outside of the tsunami inundation zone. No impacts would arise from tsunamis.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or intensity allowed by the proposed Land Use Plan. Consequently, implementation of the CAP would result in less than significant impacts to hydrology and water quality.

**Impact 5.10-6: Buildout of the General Plan would not obstruct or conflict with the implementation of a water quality control plan or sustainable groundwater management plan. [Thresholds HYD-5]**

### General Plan Update

Impact 5.10-1 above details measures that are in place to ensure future development has a less than significant impact on surface and ground water quality. These measures also ensure that future development does not obstruct or conflict with the implementation of the Santa Ana Basin Plan or the Santa Ana Watershed Action Plan.

Impact 5.10-2 discusses the regulations and policies that safeguard groundwater supplies and ensure sustainable groundwater management. These regulations and policies ensure that future development does not obstruct or conflict with the Corona Groundwater Management Plan. In addition, the goals and policies in the General Plan would ensure that the City would not obstruct with implementation of the watershed action plan for the Santa Ana Watershed Region of Riverside County, the Recharge Master Plan for the Temescal Basin, or the Corona Groundwater Management Plan:

- **Goal ER-1** Enhancement, protection, and management of the quality and quantity of hydrologic resources in Corona to ensure its long-term quality and sustainability. (Policies ER-1.1 through ER-1.7)
- **Goal ER-2** Sustainable use of finite water resources for the long-term use of residents, the business community, and visitors of Corona. (Policies ER-2.1 through ER-2.9)
- **Goal ER-3** Long-term groundwater sustainability of the local water supply for domestic, commercial, industrial, agricultural, environmental protection, and other purposes. **(**Policies ER-3.1 through ER-3.6)
- **Goal ER-4** Proper management of floodplain and riparian areas for their importance to wildlife habitat, unique and sensitive plant life, water recharge, and public health and safety. (Policies ER-4.1 through ER-4.5).

- **Goal IU-1** Secure water supply, water treatment, distribution, pumping, and storage systems that meet the current and projected future daily and peak water demands of Corona in an equitable, efficient, and sustainable manner. (Policies IU-1.1 through IU-1.9)

- **Goal IU-2** Minimize water consumption and urban runoff generation through site design, the use of water conservation systems, and other techniques. (Policies IU-2.1 through IU-2.10)

- **Goal IU-3** A secure sewer collection and treatment system that meets current and projected future daily and peak load demands in Corona and protects public health and the environment in an efficient, equitable, and sustainable manner. (Policies IU-3.1 through IU-3.10)

- **Goal IU-4** Adequate planning, construction, maintenance, and funding for storm drainage and storage control facilities to support permitted land uses and protect the health and safety of the public and environment. (Policies IU-4.1 through IU-4.7)

- **Goal IU-5** Ensure that urban runoff from existing and new development does not degrade the quality of the City's surface waters, groundwater system, and other sensitive environmental areas. (Policies IU-5.7 through IU-5.10).

Therefore, buildout of the General Plan would not obstruct or conflict with the implementation of a water quality control plan or a sustainable groundwater management plan and impacts would be less than significant.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or intensity allowed by the proposed Land Use Plan. Consequently, implementation of the City's Climate Action Plan would result in less than significant impacts to hydrology and water quality.

## 5.10.5 Existing Regulations and Standard Conditions

### Federal

- United States Code, Title 33, Sections 1251 et seq.: Clean Water Act
- United States Code Title 42, Sections 300f et seq.: Safe Drinking Water Act
- Code of Federal Regulations Title 40 Parts 122 et seq.: National Pollutant Discharge Elimination System
- United States Code Title 42, Section 4011-4033: National Flood Insurance Program
- H.R.5521, Urban Flooding Awareness Act

### State

- California Water Code Sections 13000 et seq.: Porter-Cologne Water Quality Act

- NPDES No. CAS000002, State Water Resource Control Board

### Regional

- Order R8-2010-0033, Santa Ana Regional Water Quality Control Board (MS4 permit)

### City of Corona

- Corona Municipal Code: Chapter 13.27 and Title 18

## 5.10.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, standard conditions of approval, and General Plan Update policies the following impacts would be less than significant: 5.10-1, 5.10-2, 5.10-3, 5.10-4, and 5.10-5.

## 5.10.7 Mitigation Measures

No mitigation measures are warranted.

## 5.10.8 Level of Significance After Mitigation

There are no significant unavoidable adverse impacts relating to hydrology and water quality.

## 5.10.9 References

AKM Consulting Engineers, Todd Engineers (AKM), 2008, June. City of Corona Groundwater Management Plan. sgma.water.ca.gov/basinmod/docs/download/1154

US Army Corps of Engineers (Army Corps), 2019, May 21 (accessed). Prado Dam. https://www.spl.usace.army.mil/Missions/Asset-Management/Prado-Dam/

California Department of Water Resources (DWR). 2017. Jurisdictional Dams. https://water.ca.gov/LegacyFiles/damsafety/docs/Jurisdictional2017.pdf

KWC Engineer (KWC). 2016, July. 2015 Urban Water Management Plan. https://www.coronaca.gov/home/showdocument?id=4318

Fuscoe Engineering. 2018, August 24. City of Corona General Plan Update Infrastructure Report for Hydrology, Sewer, Water and Water Quality

US Environmental Protection Agency (USEPA). 2012, September 26. Water Permitting 101. http://www.epa.gov/npdes/pubs/101pape.pdf.

# 5.11 LAND USE AND PLANNING

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts to land use in the City of Corona and its Sphere of Influence (SOI) from implementation of the proposed Corona General Plan Update. This section is based on the land-use plan, described in Chapter 3, *Project Description*, and shown in Figure 3-5, *Land Use Plan, City of Corona*, and Figure 3-6, *Land Use Plan, Sphere of Influence Areas*. The proposed goals and policies have been evaluated to determine their consistency with other relevant sections of the General Plan. The proposed project is evaluated for compatibility with the existing land uses in the surrounding area and consistency with the Southern California Association of Governments' (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the Airport Land Use Compatibility Plan (ALUCP) for the Corona Municipal Airport.

Land use impacts can be either direct or indirect. Direct impacts are those that result in land use incompatibilities, division of neighborhoods or communities, or interference with other land use plans. This section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services, or increased traffic on roadways. Indirect impacts are addressed in other sections of this DEIR.

## 5.11.1 Environmental Setting

State, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the Corona General Plan Update are summarized below.

### 5.11.1.1 REGULATORY FRAMEWORK

#### State Laws

##### *State Planning Law and California Complete Streets Act*

State Planning Law (California Government Code Section 65300) requires every city in California to adopt a comprehensive, long-term general plan for physical development of the city and its SOI. A general plan should consist of an integrated and internally consistent set of goals and policies that are grouped by topic into a set of elements and are guided by a citywide vision. State law requires that a general plan address eight required elements (Land Use, Circulation Housing, Conservation, Open Space, Noise, Safety, and Environmental Justice), but allows some discretion on the arrangement and content. Additionally, each of the specific and applicable requirements in the state planning law should be examined to determine if there are environmental issues within the community that the general plan should address, including but not limited to hazards and flooding.

Additionally, on September 30, 2008, Assembly Bill (AB 1358), the California Complete Streets Act, was signed into law, becoming effective January 1, 2011. AB 1358 places the planning, designing, and building of complete streets into the larger planning framework of the general plan by requiring jurisdictions to amend their circulation elements to plan for multimodal transportation networks.

### *Airport Land Use Compatibility*

Pursuant to Section 21676 of the Public Utilities Code, prior to the amendment of a general plan or specific plan, or the adoption or approval of a zoning ordinance or building regulation within the planning boundary established by the airport land use commission pursuant to Section 21675 of the Public Utilities Code, the local agency shall first refer the proposed action to the Airport Land Use Commission (ALUC). If the ALUC determines that the proposed action is inconsistent with the commission's plan, the referring agency shall be notified. The local agency may, after a public hearing, propose to overrule the commission by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the intent to minimize the public's exposure to excessive noise and safety hazards within areas around public airports.

## Regional Laws

### *Southern California Association of Governments*

SCAG is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization (MPO) for this region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the southern California region's MPO, SCAG cooperates with the South Coast Air Quality Management District, the California Department of Transportation (Caltrans), and other agencies in preparing regional planning documents. SCAG has developed regional plans to achieve specific regional objectives. The plans most applicable to the proposed project are discussed below.

#### ***Regional Transportation Plan/Sustainable Communities Strategy***

On April 7, 2016, SCAG adopted the 2016–2040 RTP/SCS, "Towards a Sustainable Future," which encompasses three principles, mobility, economy, and sustainability, that work as the key to the region's future. The 2016-2040 RTP/SCS provides a blueprint for improving quality of life for residents by providing more choices for where they will live, work, and play and how they will move around (SCAG 2016).

#### ***High-Quality Transit Areas***

With the adoption of the 2016-2040 RTP/SCS, SCAG has designated high-quality transit areas (HQTA). An HQTA is generally a walkable transit village or corridor that is within one half-mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. The overall land-use pattern of the 2012 RTP/SCS focuses on jobs and housing in the region's designated HQTAs (SCAG 2016). The City is designated as a SCAG HQTA Eligible Jurisdiction, and portions of its SOI are identified as 2040 HQTAs, in the 2016-2040 RTP/SCS as shown in Figure 5.11-1, SCAG *Transportation Priority Areas* (SCAG 2017).

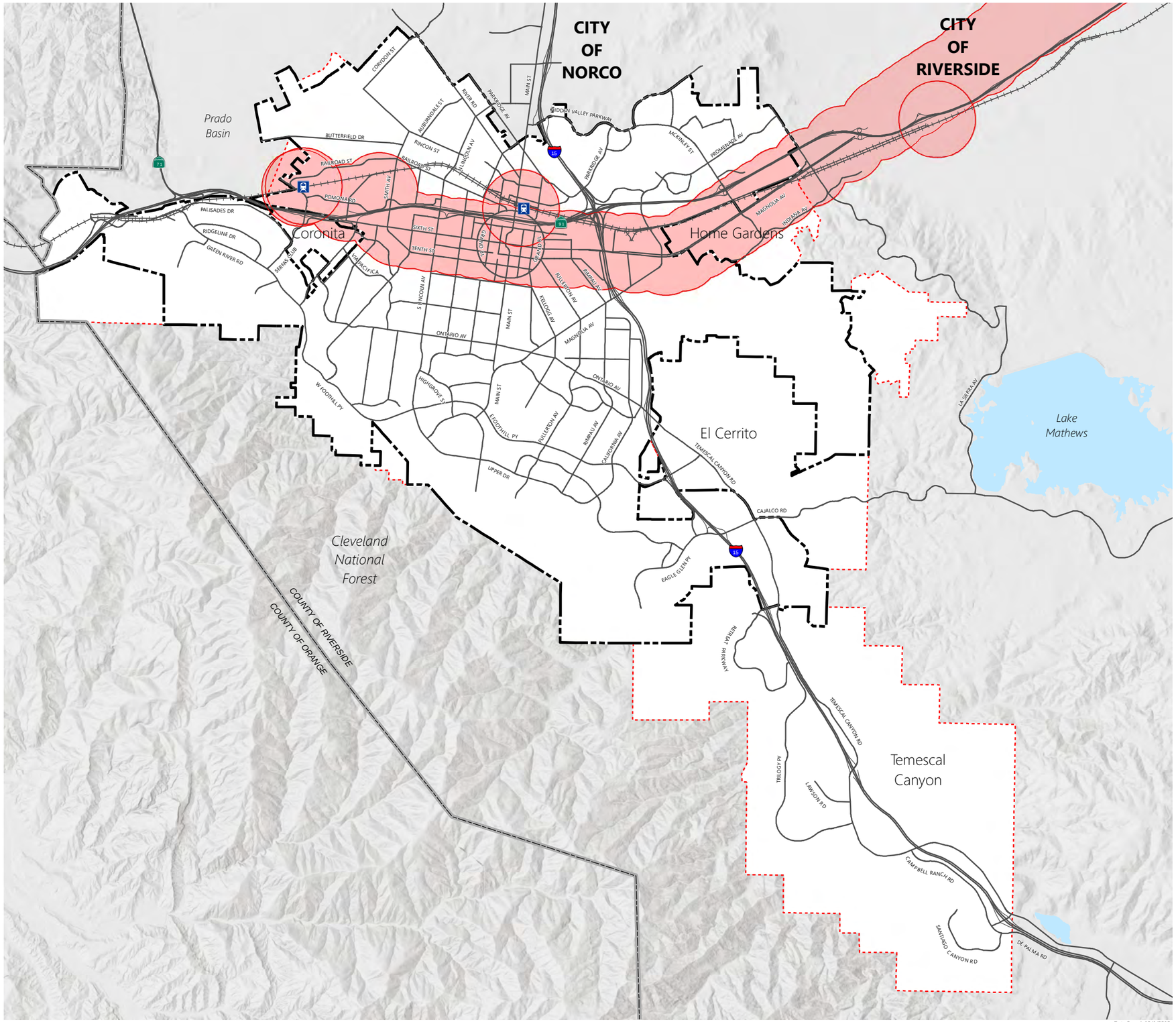


Figure 5.11-1

# SCAG TRANSPORTATION PRIORITY AREAS

## Legend

- City Boundary
- Sphere of Influence Areas
- Metrolink Station
- Railroad
- SCAG Transit Priority Areas 2040

*Source:*
*Southern California Association of Governments (SCAG) 2017*

CORONA
General Plan
EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

# 5. Environmental Analysis
## LAND USE AND PLANNING

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## Local Laws

### *City of Corona General Plan and Land Use/Zoning Designations*

The current City of Corona General Plan was adopted in March 2004, and contains the following elements: Land Use; Community Design; Housing; Historic Resources; Economic Development; Circulation; Infrastructure and Utilities; Parks, Schools, and Libraries; Police and Fire Services; Environmental Resources; and Public Health and Safety. The current General Plan provides the basis for land use designations in the City. Table 3-5, *Building Statistical Summary, Corona and SOI*, provides acreage statistics in the City of Corona and SOI.

According to the current General Plan, "The zoning map should be consistent with the General Plan Land Use Plan and the Zoning Code should be consistent with the land use classification system and density/intensity and design and development policies stipulated by policy." The Zoning Ordinance, Title 17 of the Municipal Code, is one of the primary means of implementing the General Plan.

### *Corona Municipal Airport Land Use Plan*

Corona Municipal Airport is in the northwest portion of Corona, on a 100-acre site that is leased as part of a master recreational lease between the City of Corona and the US Army Corps pf Engineers. The northwest part of the City, and portions of the City, are in the airport influence area, which is defined as generally where the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or require restrictions on those uses. The airport influence area constitutes the area where certain land use actions are subject to Airport Land Use Commission (ALUC) review. The Riverside ALUC has implemented specific compatibility criteria for land uses within the general vicinity of the airport; Corona Municipal Airport has four principal airport/land use compatibility concerns: 1) exposure to airport noise; 2) land use safety for people on the ground and occupants of the aircraft; 3) protection of airport airspace; and 4) general concerns related to aircraft overflight.

## 5.11.1.2 EXISTING CONDITIONS

The City of Corona is located in the northwestern portion of Riverside County, near the convergence of Los Angeles, Orange, and Riverside Counties, 45 miles southeast of the City of Los Angeles as shown in Figure 3-1, *Regional Map,* and Figure 3-2, *Citywide Aerial*. Corona is located in a valley, and is bordered by the City of Norco to the north, the City of Riverside to the east, and Riverside County to the west and south. The Cleveland National Forest to the south/southwest and the Prado Basin to northeast border the City; these natural areas are barriers to the future outward growth of Corona. The City's SOI encompasses the unincorporated communities of Coronita, Home Gardens, El Cerrito, and Temescal Canyon (see Figure 3-2, *Citywide Aerial*). The City of Corona has 31 specific plans; growth buildout would also occur within these specific plan areas. The City of Corona encompasses 25,551 acres, and its SOI consists of an additional 16,515 acres, for a total of 42,066 acres across the entire plan area.

## General Plan and Zoning

Table 3-1, *Existing Land Use Summary, City of Corona*, and Figure 3-4, *Current Land Use Plan*, show a summary of the existing land use in the City and SOI.

## 5.11.2 Thresholds of Significance

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

LU-1 Physically divide an established community.

LU-2 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 effect.

## 5.11.3 Relevant General Plan Policies

The following are relevant policies from the Land Use and Community Design Element of the Corona General Plan Update, which may contribute to reduce potential land use and planning impacts as a result of implementation of the proposed project.

### Land Use Element

#### *Type, Distribution, and Form of Land Uses*

- **LU-1.1** Accommodate uses that support the diverse needs of Corona's residents, including opportunities for living, commerce, employment, recreation, education, culture, entertainment, civic engagement, and social and spiritual activity that are in balance with natural open spaces.

- **LU-1.2** Emphasize the development of uses that sustain Corona as a cohesive, distinct, and self-sustaining community and minimize the need for residents to travel to surrounding communities for retail goods, services, and employment.

- **LU-1.3** Accommodate uses that maintain or enhance Corona's fiscal viability and account for current and emerging market demands, while maintaining and improving the quality of life for current and future residents.

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)

- **LU-1.5** Accommodate land use development in balance with the preservation and conservation of open spaces for recreation, aesthetic relief, natural resource value, and public safety (such as floodways, seismic fault zones, and other).

- **LU-2.1** Locate and design development to reflect Corona's unique physical setting considering its natural topography, environmental resources, natural hazards, and opportunities for views in accordance with this plan's policies.

- **LU-2.2** Require that land uses be located and designed to reflect and incorporate the property's natural drainage courses, to the extent feasible in consideration of public safety and habitat preservation.

- **LU-2.3** Concentrate land uses within prescribed areas to minimize impacts on natural environmental resources and maximize the efficiency of supporting infrastructure, transit use, and the vitality of Corona's activity and business centers.

- **LU-2.4** Maintain and reinforce the City's urban form and pattern of viable commercial and business centers and residential neighborhoods; prevent incompatibilities in land uses that could detract from the appearance, quality, or functioning of each area.

- **LU-2.5** Prioritize and reinforce the revitalization of Corona's historic Downtown as a major activity center. Encourage mixed land-uses to maximize customer base and access to transportation and public services.

- **LU-2.6** Maintain a land use pattern that accommodates a diversity of commercial districts that are differentiated by their function, customer base, and physical character and avoid unnecessary competition.

- **LU-2.7** Promote the re-use of economically obsolete and inefficient commercial corridors by consolidating retail and supporting uses into distinct activity nodes and redeveloping intervening areas for mixed use projects that integrate commercial and residential uses or single residential projects.

- **LU-2.8** Integrate a complementary mix of open spaces (including parks, trails, and landscaping) within the City's existing urban fabric to enhance character, soften hardscapes, beautify the community, and create a high quality of life..

- **LU-3.1** Permit land uses and development consistent with the Corona General Plan Land Use Designations.

- **LU-3.2** Require that development occur within the range of maximum and minimum densities consistent with land use designations allowed by the general plan and implemented through zoning districts.

- **LU-3.3** Allow flexibility in the defined land use types, densities, and intensities to account for changes in housing needs and characteristics, industrial and employment markets, and retail commercial enterprises that will occur during the implementation of this plan. Such deviations shall be considered only when found to be consistent with the plan's vision, goals, and overall policy intentions for community places, character, economy, environmental sustainability, and public safety.

### *Growth and Development*

- **LU-4.1** Accommodate future growth and development in accordance with Figure LU-1, the land use plan. This depicts lands on the City's periphery and within the existing urbanized area for which development may be considered for re-use and intensified development.

- **LU-4.2** Distribute and phase the timing of development to protect the viability, character, and quality of existing residential neighborhoods, commercial districts, and industrial/business areas.

- **LU-4.3** Allow for the development of vacant lands on the periphery of existing development that complements the scale and pattern of existing uses; protects significant plant, animal, and other natural environmental resources; protects development and population from natural hazards; and where it is logical and feasible to extend infrastructure.

- **LU-4.4** Proactively promote the adaptive re-use and infill of economically underutilized, obsolete, and dilapidated commercial and industrial sites within existing urbanized areas, in consideration of the uses, scale, and character of adjoining uses.

- **LU-4.5** Manage the timing of development and allow development to occur only when public infrastructure and services needed to support that development are available, will be provided concurrently, or are committed to be provided within a reasonable time frame.

### *Community Quality and Sense of Place*

#### *Community Form and Character*

- **LU-5.1** Promote development and revitalization of neighborhoods, commercial and industrial districts, and public places that are distinguished by their physical design, image, effectiveness in nurturing community socialization and economic activity, and perception as valued places.

- **LU-5.2** Promote development patterns and structures that recognize and maintain the historic character of recognized heritage properties and those that have potential to become eligible for historical significance.

- **LU-5.3** Distinguish the city's neighborhoods and districts in their character and physical appearance by considering their physical and visual separation, edge and entry treatment, architecture, landscape, streetscape, and comparable elements during their design and development.

- **LU-5.4** Encourage preparation of Specific Plans for large vacant lands planned for residential, commercial, industrial, or mixed-use purposes, or for the re-use of existing multiple properties where the intent is to establish a cohesive district.

#### *Green Open Spaces and Landscaping*

- **LU-5.5** Enhance Corona's system of parks, greenways, and open spaces by linking these and surrounding natural areas, including along the Temescal Creek, with pedestrian trails and greenways where feasible.

- **LU-5.6** Require the submittal and approval of landscape plans for all development projects consistent with adopted ordinances and guidelines; encourage sustainable practices for landscape materials, design, irrigation, and maintenance.

- **LU-5.7** Require property owners and tenants to maintain landscaping, remove weeds, and replace unhealthy or dead landscape; enforce landscape maintenance through proactive enforcement.

- **LU-5.8** Encourage developers to incorporate mature, specimen trees and other significant landscaping that may exist on the site into the design of the project.

***Design and Development***

- **LU-5.9** Require adherence to the design and development guidelines as subsequently stipulated by this plan's policies for each land use district, as well as implementing ordinances and specific plans.

- **LU-5.10** Promote quality development through site design, architectural elements, and landscaping characteristics that make Corona a desirable place to live and work and respond to the local context.

- **LU-5.11** Require projects to implement appropriate building orientation, setbacks, buffering, privacy, and vehicle access as well as mitigate potential impacts associated with noise and lighting in order to be compatible with adjacent land uses.

- **LU-5.12** Require that development in neighborhoods, districts, and other community activity centers be designed to accommodate public gatherings and pedestrian activity.

- **LU-5.13** Require that new master-planned residential subdivisions incorporate parks, greenways, and open spaces as character-defining amenities for their residents, emphasizing the retention of natural landforms and important plant communities..

***Building Quality and Maintenance***

- **LU-5.14** Support the conservation, maintenance, and upgrading of housing, commercial buildings, and historic structures through education, technical and financial assistance, and partnerships.

- **LU-5.15** Require that new and rehabilitated structures be designed, built, and maintained in a manner that promotes their physical longevity, and at the same time provide architectural details consistent with the City's design guidelines and other applicable codes and ordinances.

- **LU-5.16** Maintain proactive code enforcement and nuisance abatement programs to ensure that properties in Corona's residential neighborhoods and business and service districts are properly maintained in order to preserve the quality and appearance of developed properties, making the city a desirable place to reside and/or conduct commerce.

- **LU-5.17** Promote and support community efforts for the renovation of structures and facilities; work with local organizations to educate residential, commercial, industrial, and institutional property owners and tenants regarding property maintenance.

- **LU-6.1** Promote sustainable features in new construction and significant renovations, including the use of locally sourced, recycled, and sustainable-sourced building materials, energy- and water-efficient building design, integrated renewable energy and energy storage systems, and waste minimization during construction.

- **LU-6.2** Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through:
  - Site design—concentration and intermixing of development to minimize vehicular trips and promote walking and building orientation for solar access and heat gain and loss
  - Landscaping—drought-tolerant species, use of recycled water for irrigation, and other purposes
  - Capture of rainwater and re-use on site
  - Building design and construction materials—energy-and water efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques

### *Residential Neighborhoods*

#### *General Residential*

- **LU-7.1** Accommodate the development of a diversity of residential housing types that meet the needs of Corona's population in accordance with the Land Use Plan's designations, applicable density standards and design and development policies, and the adopted housing element.
- **LU-7.2** Promote the development of innovative forms of housing that increase the diversity and affordability of units to meet the needs of the population, such as mixed-use that integrate housing with commercial and other uses, live/work structures, loft housing, and other similar housing types.
- **LU-7.3** Allow for the development of accessory dwelling units and other similar uses in appropriate residential zones, provided that parking, design, building and safety, and other neighborhood regulations comply with State statutory requirements and local regulations.
- **LU-7.4** Allow for the integration of land uses within residential neighborhoods that support and are complementary to their primary function as living environments, including but not limited to: schools, parks, trails, community centers, community meeting facilities, and other comparable uses that provide supporting services.
- **LU-7.5** Allow for home occupations in Corona's residential neighborhoods that do not diminish the quality and character of the neighborhood and update the city's home occupation ordinance in accordance with state adopted legislation for certain home based businesses.
- **LU-7.6** Allow for the development of family day care facilities, appropriately sized childcare centers, and small residential care facilities (as defined by the State of California) subject to compliance with regulations in state law and the municipal code.
- **LU-7.7** Require that single-family detached and attached housing be well designed in a manner that will enhance and maintain a high level of neighborhood quality in consideration of the following principles:

- Avoidance of "box-like" structures through the articulation and modulation of building elevations and masses.
- Variation of rooflines and architectural design treatment of all elevations that are visible from public places.
- Use of entries and windows on street-facing elevations to visually "open" the house to the neighborhood.
- Minimize the use of paving for driveways and parking areas in front yard setbacks.

- **LU-7.8** Require that new multi-family residential projects be designed to convey a high level of visual and physical quality and distinctive neighborhood character in consideration of the following principles:
  - Architectural treatment of building elevations and modulation of mass to convey the character of separate units, avoiding the sense of a singular building mass.
  - Design of parking areas integral with the architecture of the residential portions of the structure, including its style, materials, colors, and forms.
  - Incorporation of usable and functional private open space for each residential unit
  - Incorporation of common open space that creates a pleasant living environment while providing attractive locations for recreation.
- **LU-7.9** Encourage the attractive treatment of front yards and other areas in residential neighborhoods that are visible from the street, including limits on the area that may be paved for parking or other uses.
- **LU-7.10** Require that fencing and walls in residential neighborhoods achieve high aesthetic and safety standards considering the following principles:
  - Fencing and walls should not obstruct vehicle sight lines and create hazards for pedestrians and bicyclists.
  - Fencing and walls should be compatible with or complement the architectural design of nearby structures.
  - Fencing and walls shall be regularly maintained, repaired, and kept in excellent condition
  - Fencing and walls should make a positive contribution to the character of the neighborhood.

***Existing Neighborhoods***

- **LU-8.1** Promote the conservation of existing residential neighborhoods, permitting the infill of housing that is compatible in density and scale with existing uses, except where densities may be increased as depicted on the land use plan or as permitted by state law.

- **LU-8.2** Provide opportunities for the development of new housing adjacent to the Downtown and the Sixth Street corridor, which may include a variety of housing types, including mixed use projects, that integrate housing with commercial and office uses.

- **LU-8.3** Provide opportunities for housing that are in pace with adopted state legislation and allow for a variety of housing types such as integrating residential with commercial and office developments, near activity centers and in transit oriented areas near the Metrolink Station.

- **LU-8.4** Provide opportunities for "live-work" development to accommodate artists, craft persons, and professionals working from home as a buffer between residential and nonresidential uses in Downtown, North Main Street, and adjoining commercial and industrial corridors and districts.

- **LU-8.5** Promote development and enhancement of places that serve as the focal point of identity and activity in neighborhoods through the integration and, where feasible, consolidation of parks, schools, community facilities, religious facilities, and similar uses.

- **LU-8.6** Encourage the rehabilitation and relocation of historic homes slated for demolition to other appropriate sites in the City; encourage the rehabilitation of homes that will soon become eligible for historic designation due to their age, integrity, and significance.

- **LU-8.7** Require that new single-family homes constructed in existing neighborhoods be designed to complement existing structures in their property setbacks, scale, building materials, and color palette, and exhibit a high quality of architectural design.

- **LU-8.8** Require multi-family units built within mixed density residential neighborhoods to be designed to convey a single-family character incorporating well-defined entrances, modulated building masses and facades, and extensive site landscape.

- **LU-8.9** Discourage replacement of existing housing with substantially larger and massive structures where the existing home is in good physical condition and the new construction would deviate significantly in scale and character than their surroundings.

- **LU-8.10** Require that building and site alterations and additions are compatible in scale and design with existing homes and neighborhood character, respect the privacy of nearby homes, and preserve solar access and views.

- **LU-8.11** Discourage the gating of existing residential neighborhoods unless there are overriding public safety concerns that would require gating to be installed.

- **LU-8.12** Require that nonresidential uses be located and designed to maintain the quality and character of the neighborhood and prevent traffic, noise, odor, lighting, and other adverse impacts on adjoining housing units.

- **LU-8.13** Promote the maintenance and upgrade of existing residential neighborhoods through proactive code enforcement and financial incentive and technical assistance programs, where appropriate and feasible.

- **LU-8.14** Encourage and support homeowners' associations and local groups in the conduct of neighborhood "cleanup" days where assistance is provided for removal of debris, painting, and other property improvements.

*New Neighborhoods*

- **LU-9.1** Accommodate the development of new residential neighborhoods in areas depicted by the land use plan and growth and development policy plan that contain a diversity of housing and supporting schools, parks, and other amenities.

- **LU-9.2** Promote the development of master planned communities that integrate a diversity of housing, parks, schools, trails, open spaces, and other elements into a distinct place. Require a development pattern that ties together parcels into a cohesive whole addressing the location and massing of buildings, architecture, landscape, pedestrian trails, key landmarks, and similar elements.

- **LU-9.3** Encourage the integration of a mix of housing types into new residential neighborhoods, which may include single-family homes, townhomes, row houses, live-work, and multi-family units to the extent the integration is appropriate and complements surrounding land uses.

- **LU-9.4** Design the distribution of residential land uses to avoid the overconcentration of multi-family units by limiting their number in any single location and providing for their dispersal throughout the neighborhoods.

- **LU-9.5** Establish and locate a focal point of identity and activity within walking distance of all housing in new residential neighborhoods that may consist of a school, community meeting facilities, parks, nonresidential areas with public facilities, and similar uses.

- **LU-9.6** Support the development of public uses that offer the opportunity for the sharing of facilities such as the integration of school play fields and athletic fields with public parks, public and school libraries, and multi-purpose facilities.

- **LU-9.7** Site and design new residential developments to enhance neighborhood quality by::

    - Establishing a network of streets and pedestrian paths that promote neighborhood activity, internal access, and connectivity to surrounding areas.

    - Enhancing the visual quality and character of street frontages through extensive landscape and reduction of the visual dominance of garages.

    - Promoting architectural diversity for residential, commercial, and other supporting uses consistent with established design guidelines.

- Varying heights and rooflines of new development (residential, commercial, etc.) along the street frontages to allow for visual interest.

- **LU-9.8** Require that multi-family development abutting single-family housing units incorporate setbacks, step down in height and mass as it approaches lower density areas, and incorporate other design elements to ensure an appropriate transition between the uses.

- **LU-9.9** Require that residential neighborhoods be designed to ensure visual and physical compatibility among their various uses, as well as adjoining neighborhoods, commercial and industrial districts, and open spaces.

- **LU-9.10** Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.

- **LU-10.1** Accommodate the development of low-density single-family housing that reflects and maintains the rural character of Corona's foothills and canyons, in accordance with the land use plan's designations, density standards and design and development policies.

- **LU-10.2** Require that development projects be located and designed to maintain predominant topographic forms, contours, and elevations in the City's foothills and canyons.

- **LU-10.3** Minimize the removal of native landscape and integrate with new residential development, to the extent feasible and practical for fire control; require adherence to building construction and site designs necessary to minimize risks from wildfire, such as implementation of fuel modification areas, concrete tile roofs and boxed eaves.

- **LU-10.4** Require that new development and major rehabilitations be located, designed, and built to maintain natural drainages, riparian vegetation, and the viability of habitats, except as necessary to protect from flooding or wildfire, or that impacted areas be properly mitigated.

- **LU-10.5** Establish community design standards that reflect the rural character such as the use of wood or stone fences, limited sidewalks, extensive street landscape, low levels of street lighting, and similar techniques.

- **LU-10.6** Establish a multi-use trail system that connects the rural and estate neighborhoods adjoining open spaces and parklands. These may be developed for pedestrians, bicycles, and/or for horseback riding where allowed by zoning.

- **LU-10.7** Within hillside areas, allow for the clustering of homes where it contributes to the preservation of open spaces and hillsides, conforms to the distinct environmental and topographical characteristics of the land, and achieves other community goals.

- **LU-10.8** Require geotechnical studies for development proposed in the hillsides, within close proximity to the Elsinore Fault Zone, and other areas known for potential seismic and geologic hazards to identify areas requiring appropriate safeguards.

### *Commercial and Office Districts*

- **LU-11.1** Encourage a comprehensive range of retail, service, and other commercial uses in the City that provide goods and services to meet the diverse needs of Corona's residents and businesses, in accordance with the land use plan's designations and applicable density standards and design and development policies.

- **LU-11.2** Maintain a range of retail commercial and office uses and districts in the City that are differentiated by their functional role, customer base, and physical form and character. Such districts include:

  - Mixed-use Downtown that serves as the center of Corona's identity and activity; provides a wide range of retail, commercial, and specialty goods; and is designed and developed to emphasize pedestrian activity.

  - Community retail districts that contain larger-format uses, national retailers, restaurants, and overnight accommodations, that serve the region and the local community, generally located in proximity to freeway off-ramps.

  - Neighborhood shopping districts providing basic goods and services, such as grocery stores and personal services, within easy access and that are intended to serve the needs of residents living in nearby neighborhoods.

- **LU-11.3** Promote reinvestment in declining shopping centers and districts, with an emphasis on new retail uses that serve adjacent neighborhoods and contribute to the overall vitality of the centers.

- **LU-11.4** Maintain appropriate areas in the city for heavy commercial uses. While development standards in these areas should respect operational characteristics of these uses, they should promote aesthetic improvements and traffic safety and minimize impacts.

- **LU-11.5** Regulate the extent, location, and design of drive-thru and "big box" commercial uses to ensure their compatibility with the functional role and character of adjoining land uses while addressing the operational needs of such commercial uses.

- **LU-11.6** Require that transit-supporting facilities, such as bus turnouts, passenger drop-offs, and shelters, be incorporated in new commercial centers or when subject to major renovation and improvement, where appropriate to support local, citywide, and regional transit systems. The location and type of facility should be coordinated with transit agencies.

- **LU-11.7** Regulate the location and number of alcohol sales, adult business, game arcade, and other "community-sensitive" uses based on proximity to other such uses, residences, schools, parks, and religious facilities, consistent with State statutory requirements.

- **LU-11.8** Require that new development within commercial and business districts be designed to convey a high quality of architectural and site quality in consideration of the following principles:

  - Architectural treatment and modulation of all building elevations, including ancillary facilities such as storage.

  - Incorporate extensive windows to promote visual transparency of building elevations facing sidewalks and public spaces.

  - Modulation and articulation of building elevations to provide visual interest and character.

  - Clear identification of building entries through design elements and integration of signage with the architectural character of the building.

  - Screening and visual integration of rooftop mechanical equipment.

  - Extensive use of landscape that provides a three-dimensional character.

  - Clearly delineated pedestrian connections between the business use and parking areas (e.g., paving treatment, landscape separation).

- **LU-11.9** Require that new development of multi-tenant commercial and office projects be designed to convey a unified and high-quality character in consideration of the following principles:

  - Avoidance of sense of single building volume and mass through modulation, articulation, setbacks, and other techniques.

  - Consistent architectural design vocabulary, building articulation, materials, and colors.

  - Linkage of individual storefronts and structures through common pedestrian walkways, plazas, and other open spaces that provide amenities for customers.

  - Variation of building heights and rooflines to avoid uninterrupted planes and promote visual interest.

  - Architectural treatment of parking structures consistent and integrated with commercial and business buildings.

  - Provision of pedestrian connections to off-site pedestrian areas, where appropriate.

- **LU-11.10** Require that large-footprint single commercial uses ("big box") be designed to exhibit a high level of architectural quality and avoid the sense of undifferentiated and continuous building elevations

through the use of modulated building volumes, façade articulation, fenestration, well-defined entries, pedestrian plazas, and similar techniques.

- **LU-11.11** Promote the renovation of existing commercial and office centers in accordance with the design and development principles defined by Policies LU-11.11–LU-11.13, emphasizing the inclusion of plazas, sidewalks, streetscape, and other improvements to enhance their character as pedestrian-gathering places, when property owners invest in major redevelopment of their properties.

- **LU-11.12** Require that commercial projects abutting residential neighborhoods be designed and buildings located to prevent conflicts and ensure an appropriate interface with adjoining housing in consideration of the following principles:

  - Reduction of building heights and modulation of mass and volume of the building in proximity to the adjacent housing.

  - Inclusion of landscape and attractively designed walls as buffers to mitigate noise, provide privacy, and serve as a visual amenity between the commercial and residential uses.

  - Design of building elevations facing residential properties to ensure privacy of adjoining housing.

  - Control of the location of commercial truck access, loading, parking, and comparable functions in proximity to adjoining housing or other sensitive land uses.

  - Design of on-site and building lighting to prevent spillover, glare, and adverse illumination of adjoining residential properties.

- **LU-11.13** Require that entertainment, drinking establishments, and similar uses incorporate physical and operational measures to prevent adverse impacts and ensure safety for adjoining residential properties.

- **LU-11.14** Require that a commercial site's vehicular access and parking be located and designed to prevent adverse impacts on adjoining residential uses.

### *Industrial Districts*

- **LU-12.1** Accommodate existing and new manufacturing, research and development, professional office, and similar uses in accordance with the land use plan's designations and applicable density standards and design and development policies.

- **LU-12.2** Allow for the development and integration of businesses and services that support and are ancillary to the primary industrial function and employee needs (e.g., production support, financial institutions, business services, restaurant).

- **LU-12.3** Discourage the development of industrial uses that are land extensive, generate few job opportunities, and contribute little revenue for the City.

- **LU-12.4** Encourage the reuse of underutilized, vacant, or obsolete industrial buildings with higher value uses that are consistent with the goals and policies of the General Plan.

- **LU-12.5** Work proactively with property owners of declining industrial sites to facilitate upgrades and re-use for contemporary business uses. Such may include incentives for parcel consoldation to facilitate the development of cohesive and well-defined business parks.

- **LU-12.6** In accordance with City industrial design guidelines, require that new and renovated industrial properties and structures be designed to achieve a high level of quality, distinctive architecture, and be compatible with adjoining uses in consideration of the following principles:

  - Modulation of building volumes and masses and façade articulation to avoid blank or unarticulated façades.

  - Architectural treatment of all building elevations to minimize sense of monotonous and undifferentiated walls.

  - Inclusion of courtyards, plazas, and other uses that serve as amenities for employees.

  - Signage should be attractive; consistent; well designed and proportioned; and carefully located to enhance the character of the use of the district or site.

  - Extensive landscaping of open spaces.

  - Service and utility areas, including loading docks, storage areas, mechanical systems, and trash bins, shall be screened from view and integrated into the design of a project and enclosed

  - Enclosure of storage areas with decorative screening or walls.

  - Location and design of driveways to minimize conflicts with adjoining uses and shield from public view to the extent practically feasible.

  - Mitigation of noise, odor, lighting, vibration, and other impacts.

- **LU-12.7** Regulate the development of industrial uses (consistent with local regulation and state law) that use, store, produce, or transport toxic and hazardous materials; generate unacceptable levels of air or noise pollution; or result in other adverse impacts.

- **LU-12.8** Require that heavy industrial uses incorporate landscaped setbacks, screening walls, berms, downward focused lighting fixtures, and/or other appropriate elements that mitigate visual and operational impacts on adjoining land uses.

- **LU-12.9** Require that heavy truck and vehicle access for industrial land uses be effectively placed and managed to ensure that it is safe and efficient for the present use and that it minimizes noise, odor, vibration, traffic, queuing back onto streets or existing or adjacent properties, and other safety impacts on adjoining uses.

### *Mixed-Use Districts*

- **LU-13.1** Accommodate mixed-use projects that integrate housing with retail, office, and other uses within the same structure or on the same site, or the development of the property exclusively for commercial and office uses in accordance with the land use plan's designations and applicable density standards and design and development policies.

- **LU-13.2** Limit retail commercial and professional office uses within a mixed-residential-commercial/office use development to those uses that are compatible with residential uses.

- **LU-13.3** Require that adequate open space and, for larger projects, recreational facilities be incorporated into mixed-use development projects to meet the need of their residents and improve overall aesthetics.

- **LU-13.4** Require mixed use projects be implemented through a specific plan to provide for cohesive and integrated development of commercial uses and housing or industrial/commercial/office uses in accordance with the principles herein and to ensure compatibility with adjoining uses.

- **LU-13.5** Require that commercial uses be located along the street frontage where sites are developed for mixed-use projects, with housing on the upper levels or to the rear of the commercial uses.

- **LU-13.6** Require that mixed-use projects be designed to convey a high level of architectural and landscape quality; ensure compatibility of commercial and residential uses in consideration of the following principles:

    - Incorporate elements to avoid conflicts among functions, such as noise, lighting, and other factors.

    - Visual and physical integration of the commercial and residential uses.

    - Architectural treatment of building elevations and modulation of their massing.

    - Incorporation of separate and well-defined entries for commercial uses and residential units.

    - Design of parking areas and facilities to be architecturally consistent and integrated with commercial and residential uses.

    - Incorporation of extensive site landscape, where feasible.

- **LU-14.1** Accommodate development of mixed-use projects that integrate industrial, commercial, and/or office uses on the same site or within a unified corridor, or the development of the property exclusively for light industrial (without commercial) in accordance with the Land Use Plan's designations, density standards, and design/development policies.

- **LU-14.2** Limit the industrial uses to those that are compatible with commercial and office development, emphasizing nonpolluting light industries, such as research and development, e- commerce, high technology, and related uses.

- **LU-14.3** Require that a Specific Plan be approved for mixed use projects that provides for cohesive and integrated development of industrial and commercial uses in accordance with the principles stipulated herein and to ensure compatibility with adjoining uses.

- **LU-14.4** Require that mixed-use projects be designed to convey a high level of architectural and landscape quality and ensure compatibility among commercial and industrial uses in consideration of development and design policies stipulated independently for these uses.

### *Public and Institutional Uses*

- **LU-15.1** Accommodate existing schools, parks, government, fire and police facilities, utility, and institutional uses suited to serving the local needs of Corona residents and business in accordance with the land use plan's designations and applicable design and development policies.

- **LU-15.2** Allow for the development of new schools, parks, government, fire and police facilities, utility, and institutional uses in any location of the City, regardless of the land use plan's designation, provided the use is environmentally suitable and compatible with adjoining land uses, and adequate infrastructure can be provided.

- **LU-15.3** Promote collaborative and creative solutions between the public and private sectors to develop additional schools, parks, and other public facilities in the City and sphere of influence.

- **LU-15.4** Ensure that the City's public buildings, sites, and infrastructure are designed to be compatible in scale, mass, character, and architecture with the district and neighborhood in which they are located and pertinent design and development characteristics specified by this plan.

- **LU-15.5** Encourage non-City public agencies to design their structures and improvements to achieve a high level of visual and architectural quality and complement adjoining uses.

- **LU-15.6** Promote the consolidation of public uses in new residential communities—for example, the integration of parklands, schools, libraries, and community meeting facilities to enable them to serve as a centerpiece of community identity, as well as to maximize the efficient use of land.

- **LU-15.7** Strive to incorporate best practices in sustainability (including water conservation, energy conservation, groundwater filtration, and other similar techniques) into the design and development of public and institutional buildings.

### *Open Spaces*

- **LU-16.1** Accommodate open spaces that can be used for recreation and conserved to protect significant plant and animal habitats and population from the risks of flood, fire, and seismic hazards in accordance with the designations of the land use plan.

- **LU-16.2** Require the dedication of additional open spaces in new residential subdivisions and other applicable development, where necessary, to preserve the natural topography, plant and animal habitats, and flooding and drainage corridors in accordance with subsequent policies of this plan.

- **LU-16.3** Protect viewsheds by prohibiting the placement of electrical transmission lines, substations, and other types of overhead or at grade heavy infrastructure into public open space or other sensitive areas.

- **LU-16.4** Design improvements constructed in public open spaces to reflect their natural environmental setting in form, materials, and colors and to ensure compatibility with adjoining residential, commercial, and industrial uses.

- **LU-16.5** Require that improvements required to be placed in open space areas (e.g., reservoirs, lighting, and other infrastructure) be designed to minimize the impact on the landscape, avoid obstructing viewsheds, and be shielded to the extent feasible by landscaping, trees, and other natural forms.

- **LU-16.6** As a requirement for new development, ensure the financing, planning, design, and construction of parkland as required by the Quimby Ordinance, community needs, and consistent with the parks, recreation, and education element.

- **LU-16.7** Work with Corona Fire, CAL FIRE and Forest Service and with property owners in affected areas to reduce and minimize the hazards associated with wildfire in the hillsides and open spaces, consistent with the goals and policies of the safety element.

### *Opportunity Districts and Sites*

#### ***Downtown Corona***

- **LU-17.1** Accommodate a mix of commercial, office, entertainment, civic, cultural, housing, and similar uses in accordance with the land use plan's designations and applicable density standards and design and development policies, as may be precisely defined by specific plan.

- **LU-17.2** Allow for the development of a mix of housing types as well as senior housing to enhance the customer base and promote walking to Downtown uses and activities.

- **LU-17.3** Promote innovative redevelopment activities as feasible and supporting programs for business retention and proactive recruitment of new businesses to stimulate the revitalization of the Downtown.

- **LU-17.4** Promote the development of community-oriented, cultural, and live/ theatrical performance uses, building on the Civic Center's current role as the centerpiece of arts and culture.

- **LU-17.5** Accommodate public gatherings, festivals, and other special events in public places, such as parks and the community center

- **LU-17.6** Promote and support the redevelopment of the Corona Mall and adjacent properties into a central attraction within the Downtown Core, with a mix of supporting land uses.

- **LU-17.7** Ensure that new Downtown development is attractive and creates an image conducive to economic revitalization consistent with the adopted specific plan.

- **LU-17.8** Maintain the generally small scale, "village-like" character of Downtown's buildings, avoiding large "box-like" structures or developments and renovations of buildings that are inconsistent with the character of adjacent land uses.

- **LU-17.9** Promote the consolidation of individual lots for the development of cohesive and well-designed commercial and mixed-use projects that maintain the area's character of low-rise and pedestrian-oriented buildings with distinctive storefronts.

- **LU-17.10** Locate and design commercial and civic structures and sites to achieve a pedestrian-oriented environment that serves as a centerpiece of community activity.

- **LU-17.11** Require that commercial uses be designed to exhibit a high level of architectural and site quality in accordance with the principles defined by Policies LU-11.11 through LU-11.13.

- **LU-17.12** Require that mixed-use projects that integrate commercial uses with housing be designed to exhibit a high level of quality in accordance with the principles defined by Policy LU-13.6.

- **LU-17.13** Ensure that multi-family housing conveys high quality visual character, exemplified by modulated building masses, articulated facades, separate or well-defined entries for each unit, extensive landscape, and on-site amenities in accordance with principles defined by Policy LU-7.8.

- **LU-17.14** Promote the development of more cohesive and uniform patterns of housing types and densities in the Downtown, avoiding the "hodge-podge" appearance that currently exists on some streets.

- **LU-17.15** Enhance the historic character of the Downtown by requiring new construction to implement architectural features reminiscent of the era.

- **LU-17.16** Identify and promote Downtown's historic housing and support the rehabilitation and preservation of existing homes of historic significance.

- **LU-17.17** Promote the heritage of historic structures and sites by encouraging the placement of markers and supporting financial incentives.

- **LU-17.18** Promote the development of centralized parking facilities that can be shared by multiple businesses to allow for a more pedestrian and social environment in Downtown.

- **LU-17.19** Consider limiting the vehicle right-of-way along key corridors within the Downtown, substituting right-of-way formerly dedicated to vehicles to routes for pedestrians and bicyclists.

- **LU-17.20** Retrofit and improve existing streetscapes with pedestrian improvements, sidewalks, specialty pavements, benches, and other features to encourage walkability.

- **LU-17.21** Enhance the visual character, pedestrian activity, and distinct identity for Downtown streets with elements such as trees, plantings, benches, trash receptacles, sidewalk and crosswalk paving, signage, pedestrian-scaled lighting, entry identification, public art, and comparable improvements.

- **LU-17.22** Incorporate extensive landscaping treatments to Downtown street corridors with elements such as tree planting with mature trees, planters, landscaped gateways, and other similar techniques to beautify and create a downtown ambience.

- **LU-17.23** Support the ongoing improvement of commercial and residential properties in the Downtown through programs of education, financial assistance, and partnerships with local businesses, organizations, and nonprofits.

- **LU-17.24** Maintain proactive code enforcement and nuisance abatement programs to sustain the quality of development and character of the Downtown.

- **LU-17.25** Repair, upgrade, and maintain the quality of public streets and sidewalks in the Downtown to encourage pedestrian activity, improve roadway safety, and beautify streets.

- **LU-17.26** Promote and work with local business organizations to establish an annual calendar of events that attracts residents and visitors Downtown.

- **LU-17.27** Work with law enforcement officials to maintain a visible presence to enhance and maintain the safety of Downtown for residents, visitors, and business..

*North Main Street*

- **LU-18.1** Accommodate commercial retail, service commercial, business park, industrial, and mixed uses in accordance with the land use plan's designations, applicable density standards and design and development policies, and adopted specific plan.

- **LU-18.2** Prioritize the development of professional offices and supporting uses, including the possible intensification of these uses in areas appropriate for such uses.

- **LU-18.3** Provide opportunities for intensified office, commercial, and mixed-use development that integrate housing with commercial and office uses in proximity to the Metrolink station.

- **LU-18.4** Support redevelopment and other programs for business retention and proactive recruitment of businesses to stimulate revitalization of the North Main Street corridor.

- **LU-18.5** Promote high quality architectural and landscape design of new construction and renovated buildings in accordance with Policies LU-11.11–LU-11.13 for commercial projects, LU-12.6–LU-12.9 for industrial projects, and LU-13.5–LU-13.6 for mixed-use projects.

- **LU-18.6** Encourage the use of diverse and eclectic architectural design styles, varying building forms and geometries, combinations and juxtapositions of exterior materials and finishes, and the use of climatically sensitive building elements.

- **LU-18.7** Incorporate streetscape improvements that establish a distinct identity and character for North Main Street (entries, signage, paving, lighting, landscape, public art, etc.).

- **LU-18.8** Provide pedestrian and multi-modal transportation connections and improvements that link North Main Street uses to the Metrolink station.

- **LU-18.9** Encourage the renovation or rehabilitation of existing buildings, developments, and shopping centers to generate economic activity, support adjacent residential neighborhoods, and improve the visual environment of the area..

***East Sixth and Magnolia Avenue Corridors***

- **LU-19.1** Consider expansion of land uses that contain modern industrial uses, that integrate a mix of clean industrial uses with supportive land uses adjacent to or within a campus environment.

- **LU-19.2** Promote the development of sites for any of these uses individually or integrated as a cohesive mixed-use project that creates economic synergy and contributes job opportunities for residents.

- **LU-19.3** Promote the consolidation of small, underutilized lots, or irregularly shaped parcels into larger parcels that are conducive to and supportive of viable and more cohesive development projects.

- **LU-19.4** Require that a specific plan be prepared for mixed-use projects that provides for cohesive and integrated development of industrial and commercial in accordance with the principles stipulated herein and to ensure compatibility with adjoining uses.

- **LU-19.5** Require that mixed-use projects be designed to convey a high level of architectural and landscape quality and ensure compatibility among commercial and industrial uses in consideration of the design and development policies set forth independently for these uses.

- **LU-19.6** Maintain a comprehensive streetscape, lighting, landscaping, and signage improvement program that will improve aesthetics and property values along the Sixth Street corridor; promote increased landscaping fronting properties where deficient.

- **LU-19.7** Encourage the renovation or rehabilitation of existing buildings and sites to imrpove the quality, appearance, and overall value of the East Sixth Street and Magnolia Avenue corridors.

- **LU-19.8** Support improvement of industrial properties through education, financial assistance (e.g., CDBG grants and low-interest loans), and partnerships with local businesses, organizations, and nonprofits.

- **LU-19.9** Maintain proactive code enforcement and nuisance abatement efforts to sustain quality of development, address nonconforming land uses, and improve the character of the area.

*Eagle Valley*

- **LU-20.1** Allow for the development of high technology, biomedical, research and development, and comparable light industrial uses that provide job opportunities for Corona's residents in accordance with the land use plan and applicable density, design and development policies.

- **LU-20.2** Develop uses concurrent with the establishment of a transportation corridor that provides access from Cajalco Road.

- **LU-20.3** Require that a Specific Plan be prepared for mixed-use industrial and commercial projects that provides for cohesive and integrated development of commercial uses in accordance with the principles stipulated herein and to ensure compatibility with adjoining uses.

- LU-20.4 Require that mixed-use projects be designed to convey a high level of architectural and landscape quality and ensure compatibility among commercial and industrial uses in consideration of Development and Design policies stipulated independently for these uses.

- **LU-20.5** Require that development be located and designed to preserve substantial open spaces onsite that account for its topography and serve as transitions to surrounding open spaces.

- **LU-20.6** Locate and design development to complement and assure its compatibility with the potential Metropolitan Water District (MWD) water treatment facility, if developed.

*Cajalco Road / Interstate 15*

- **LU-21.1** Allow for the conversion of the vacant site to a master-planned mixed-use community, in accordance with the land use plan's designation and applicable design and development policies.

- **LU-21.2** Allow for the development of urban uses on the property that complement adjoining residential neighborhoods, commercial districts, and open spaces, with the type and density of uses determined through the formulation and processing of a specific plan.

- **LU-21.3** Allow for a high density overlay which allows for model homes of varying densities and types of up to 36 du/ac and an increase in dwelling units for age-qualified units as both specified in the adopted specific plan.

- **LU-21.4** Require that any development on the site be designed to reflect its topographic setting and natural resources.

- **LU-21.5** Require that development be located and designed to ensure adequate transitions with surrounding open spaces and natural areas.

### Sphere of Influence

#### *Annexation*

- **LU-22.1** Coordinate with the County of Riverside, landowners, and pertinent service agencies to ensure that development within the SOI complements, does not adversely compete with, or negatively impact the fiscal viability of Corona.

- **LU-22.2** Ensure that annexations to the City of Corona are consistent with the goals and policies of the general plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

- **LU-22.3** Require that existing and proposed development within proposed annexation areas generate sufficient tax or other revenue base to compensate for their fair share of community services that are provided by the City of Corona.

- **LU-22.4** Require that infrastructure and service improvements for proposed annexation areas do not create an undue burden on existing City of Corona infrastructure and services.

- **LU-22.5** Encourage that, if an area annexes to the City of Corona, a community facilities district or similar financing district shall be established to fund the provision and maintenance of sewers, streets, and other public improvements and services.

- **LU-22.6** Upon an annexation proposal, a change in general plan land use designations, which may include the Open Space designation if not set aside for flood control, habitat conservation, or master planned use, would be fully analyzed for appropriate alternate land use designations, which are required to mitigate all identified environmental and infrastructure impacts associated with the proposed land use change.

- **LU-22.7** Promote the use of specific plans within hillside areas of the SOI to address unique topographic and natural resource constraints and allow flexibility to develop a plan to ensure visual, infrastructure, and land use compatibility with the surrounding area.

#### *General Land Uses*

- **LU-22.8** Require that existing and future land uses in the proposed annexation area complement adjoining City uses and character.

- **LU-22.9** Encourage the County of Riverside to promote development of the SOI in accordance with the SOI land use plan and applicable density standards and design and development policies for such designations that have been previously defined by this element. Should these lands be annexed to the City, they shall be subject to this plan's policies.

- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

- **LU-22.11** Actively work with local, county, and regional governmental agencies to review proposed development proposals in the City and SOI that affect the land use patterns in areas surrounding or within the sphere areas.

*Coronita and Foothills*

- **LU-22.12** Maintain the existing mix of developed residential, commercial, open space, and related uses in Coronita.

- **LU-22.13** Promote and, should the area be annexed to the City, require the development of the Coronita foothills for low-density, rural housing that maintains the area's natural topography, drainage courses, and native landscapes. Housing should be clustered in lot patterns that complement development on adjoining lands in the City.

- **LU-22.14** Require that all proposed development in the very high fire severity zones provide appropriate protection against wildfires in accordance with state law, the California Building and Fire Codes, and regulations promulgated by the Board of Forestry and Fire Protection and CAL-FIRE.

*Home Gardens*

- **LU-22.15** Promote the enhanced economic vitality of the Magnolia Avenue corridor in Home Gardens for a mix of general commercial and multi-family residential development consistent with the Temescal Canyon Area Plan.

*Eagle Valley East*

- **LU-22.16** Promote, and should the area be annexed to the City require, the development of the Eagle Valley East area for housing that is designed in a manner that maintains the area's natural topography, drainage courses, and native landscapes. Development projects are required to meet all federal, state, and local regulations that are designed to protect against wildfire.

*El Cerrito*

- **LU-22.17** Promote, and should the area be annexed to the City require, the development of the El Cerrito community for a variety of housing types, supporting local- and highway-serving commercial, and continued mining uses, as specified by the adopted specific plan and Temescal Canyon Area Plan to the extent applicable.

*Temescal Valley*

- **LU-22.18** Promote, and should the area be annexed to the City require, the development of Temescal Valley for planned residential communities that integrate a variety of housing types, schools, parks, and

other amenities; business and industrial parks supporting local- and highway-serving commercial; recreation resorts; and continued mining uses.

- **LU-22.19** Require the preparation of specific plans for mixed-use development projects and encourage their preparation for other, larger-scale residential subdivisions and business parks; provide comment to the County on proposed specific plans.

- **LU-22.20** Promote, and should the area be annexed to the City require, the development of residential communities designed to maintain the area's natural topography, drainage courses, and native landscapes. Housing should be clustered in patterns that complement development on adjoining properties. Development projects must meet all federal, state, and local regulations that protect against wildfire.

### *Corona Municipal Airport*

- **LU-23.1** Maintain, implement, and revise as appropriate an airport master plan that will guide the long-term orderly development, operation, and use of the Corona Municipal Airport.

- **LU-23.2** Work cooperatively with the Riverside County Airport Land Use Commission in periodically refining, implementing, and protecting airport influence zones around the Corona Municipal Airport.

- **LU-23.3** Work to limit the encroachment of uses that potentially pose a threat to continued airport operations, including intensification of residential, commercial, and industrial facilities within the airport safety zone and areas impacted by airport noise.

- **LU-23.4** Review proposed projects within the airport influence area of the Corona Municipal Airport for consistency with applicable airport land use compatibility plan policies adopted by the Riverside County Airport Land Use Commission and City of Corona.

- **LU-23.5** Limit building heights and land use intensities beneath airport approaches and departure paths to protect public safety, comply with the Corona Municipal Airport Land Use Compatibility Plan, and applicable state and federal regulations.

- **LU-23.6** Allow emergency responders to use the Corona Municipal Airport to respond to local and regional emergencies and disasters (urban and wildland fire, hazardous material response, etc.).

- **LU-23.7** Ensure, to the extent feasible, that environmental impacts such as noise, air quality, pollution, traffic congestion, and public safety hazards associated with continued operation of Corona Municipal Airport are mitigated to the extent practicable.

- **LU-23.8** Prior to the adoption or amendment of the general plan or any specific plan, or the adoption or amendment of a zoning ordinance or building regulation within the airport influence area of any airport land use compatibility plan, refer such proposed actions to the ALUC for review and determination as provided by the airport land use law.

## Housing Element

### *Housing Production*

- **H-1.1** Continue to support public and private sector nonprofit and for-profit organizations in their efforts to construct, acquire, and improve housing to provide access to affordable housing to lower and moderate-income households.

- **H-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

- **H-1.3** Provide sites for residential development so that scarcity of land does not unduly increase the cost or decrease the availability of housing for all segments of the community.

- **H-1.4** Support the development of sustainable projects that reduce demand for water and energy resources, reduce commute times and operational costs, and provide for transit.

- **H-1.5** Create or expand zoning designations and commensurate development standards to encourage flexibility in permitted land use.

### *Special Needs Housing*

- **H-2.1** Encourage the development of rental units with three or more bedrooms to provide affordable housing for large families.

- **H-2.2** Work with nonprofit agencies and private sector developers to encourage development of senior housing.

- **H-2.3** Encourage the production of assisted living facilities (single story houses and apartments) to facilitate access for the disabled and the elderly.

- **H-2.4** Provide emergency shelter with transitional support for city residents, including disadvantaged groups.

- **H-2.5** Encourage the upgrade and conversion of older motels to single-room-occupancy housing.

### *Neighborhood Quality*

- **H-3.1** Recognize the City's inventory of existing historic structures and seek programs to enhance and preserve those neighborhoods.

- **H-3.2** Encourage the revitalization of the existing dwelling units in the Circle area through rehabilitation programs.

- **H-3.3** Provide public services and improvements that enhance and create neighborhood stability.

- **H-3.4** Continue to establish and enforce property maintenance regulations that promote the sound maintenance of property and enhance the livability and appearance of residential areas.

- **H-3.5** Maintain design review for new residential developments to ensure the construction of livable and aesthetically pleasing neighborhoods.

### *Fair Housing*

- **H-4.1** Coordinate housing actions with social service agencies and support efforts of organizations dedicated to working toward elimination of discrimination in housing.

- **H-4.2** Promote and provide for nondiscrimination in all City programs.

## Community Design Element

### *Street Landscaping*

- **CD-1.1** Require the planting and maintenance of street trees as part of development applications with consideration for the following principles:

  - Physical constraints of the public street right-of-way, maintenance needs, and safety.
  - Importance of shade, beauty, and variety of species that encourage pedestrian activity.
  - Reflects the context of the surrounding residential, commercial, office, or industrial land uses

- **CD-1.2** Maintain a street tree maintenance and enhancement program that visually distinguishes neighborhoods, districts, and corridors. Areas requiring specific treatment include, but are not limited to, Downtown along Grand Boulevard, Sixth Street, North Main Street Corridor, and other key districts.

- **CD-1.3** Maintain a street landscape master plan that identifies species to be used along public streets throughout the City. A palette of trees and landscaping should be designed to allow for:

  - Differentiation within key districts in the City, including Downtown, Sixth Street, North Main, and other locations.
  - Differentiation at the street's key nodal intersections, entryways, and public places.
  - Sustainable landscaping practices including but not limited to drought-resistant species..

- **CD-1.4** Protect landscaping and mature trees that are symbolic of the City's agricultural heritage, history, or identity for a district, neighborhood, or street corridor.

- **CD-1.5** Require developers of residential subdivisions to submit a landscape plan that defines a program of trees and plantings that uniquely identify streets, principal entries and intersections, and activity centers such as parks and community facilities.

- **CD-1.6** Seek to expand the citywide and district-specific district financing mechanisms to fully fund the cost of adding to, maintaining, and improving the City's public landscaping and street trees.

### *City Entries and Monumentation*

- **CD-2.1** Implement improvements at key entries into Corona from the SR-91 and I-15 corridors that provide a distinct sense of arrival and identity. These may include well-designed signage, landscape, lighting, public art, monuments, fountains, structures, and other elements that serve as visual landmarks. Common elements (graphics, signage, etc.) should be used to visually distinguish the location as a primary City entry.

  Potential locations include the SR-91 interchanges at McKinley Street, Main Street, Grand Boulevard, Lincoln Avenue, Sixth Street, Serfas Club Drive-Auto Center Drive, and Green River Road, and the I-15 interchanges at Magnolia Avenue, Ontario Avenue, and Cajalco Road.

- **CD-2.2** Coordinate the design of entry improvements with adjoining commercial and industrial property owners, where appropriate. Encourage the owners to incorporate landscape, signage, and architectural design elements in their projects that contribute to and complement the sense of entry from the freeways.

- **CD-2.3** Continue to promote the establishment of entry monumentation to identify and convey a distinct sense of arrival to designated communities, districts, and neighborhoods in Corona.

### *Community Signage and Wayfinding*

- **CD-3.1** Continue to promote the city's comprehensive public signage program for public wayfinding and places that identifies:
  - City entries
  - Street names
  - Public facilities such as the city hall and library
  - Parks, trails, and other recreational amenities
  - Key districts such as the Downtown and North Main Street
  - Historic districts, buildings, sites, and landscapes
  - Public transit stations and stops
  - Directional (wayfinding) information
  - Traffic control and parking (as regulated by state codes)

- **CD-3.2** Establish design specifications for each type of public sign with consideration for the following components:

- Size, color, fonts, and shape
- Logo (City seal or other simplified graphic design that can be used for other public purposes)
- Placement (height above ground, position on utility pole, wall, or another fixture, and so on)
- Illumination (if appropriate)
- Text and data to be communicated
- Consolidation of information onto a single sign, as permitted by state codes

- **CD-3.3** Work with private developers and property owners to develop on-site project signage for identification, traffic direction and wayfinding, and parking that complements the City's design program, where appropriate.

- **CD-3.4** Require that signage on private buildings be designed to exhibit a high quality of interest and visual appeal; be integrated into and reflect the building's architectural design character; and be sized to not overwhelm its scale and mass.

- **CD-3.5** Collaborate with the Corona Historical Society or other nonprofit organizations to maintain and expand the Historic Markers program that identifies historical properties and/or historic landscapes in the City.

### *Trails and Greenways*

- **CD-4.1** Develop a plan and implement improvements that visually and physically interconnect the City's parklands and link these and residential neighborhoods with the Cleveland National Forest, and other open spaces. This may be accomplished by the installation of a continuous corridor of trees, plantings, informational signage, trails, and/or other defining elements along streets that connect the parks and open spaces or new corridors, where feasible.

- **CD-4.2** New development adjoining open spaces, washes or have the ability to provide pedestrian connections to off-site trails or pathways should be designed to ensure landscape transitions and compatibility with these resources. Such improvements should be designed to provide adequate flood protection for adjoining properties.

### *District, Nodes, and Corridors*

#### ***Downtown Corona***

- **CD-5.1** Implement the streetscape improvements described in the Downtown Revitalization Specific Plan that are intended to uniquely identify Downtown Corona and enhance the pedestrian experience.

- **CD-5.2** Maintain and expand a program of Historic Markers that identify important historical buildings, properties, and landscape in the Downtown.

- **CD-5.3** Require renovations of buildings and new construction exhibit a high level of architectural character and foster pedestrian activity by adhering to design guidelines of the Downtown Revitalization Specific Plan.

*Corridor Enhancement*

- **CD-5.4** Maintain and expand, where appropriate, streetscape improvements that uniquely identify and contribute to the character of the North Main Street, complementing the trees, landscape, signage, lighting, and other elements that have been implemented.

- **CD-5.5** Require that the renovation of existing buildings and new construction along North Main Street Corridor exhibit a high level of architectural character by adherence to the design guidelines of the N. Main Street Specific Plan.

- **CD-5.6** Implement streetscape improvements for Sixth Street that enhance its identity and character. This should differentiate the street into its functional sub-areas. Improvements that should be considered include::

    - Common street trees with accent trees at key nodes and intersections. Areas developed with housing and mixed-uses should have shade trees for pedestrians.

    - Signage, landscape, lighting, or other elements at the entry portals from the freeways.

    - Uniform and well-designed signage to identify key activity locations, wayfinding, traffic control, and parking. A logo should be incorporated to uniquely identify corridors and districts.

    - Uniform and well-designed street furniture, clustered at transit stops and activity centers..

- **CD-5.7** Identify other key corridors (Magnolia Avenue, Ontario Avenue, etc.) that connect major activity centers and consider the inclusion of public landscaping, specialty pavement, signage, lighting, and other corridor enhancement projects that signal arrival into major districts.

*Freeway-Oriented and Community-Oriented Commercial Centers*

- **CD-5.8** Require commercial and office centers to enhance their aesthetic quality, image, and "fit" with adjoining land uses. Elements may encompass site and entry identification by signage, landscape, or lighting; extensive on-site landscape; public art; improvements of abutting public streetscapes; and other amenities.

- **CD-5.9** Require that the renovation of existing buildings and new construction within freeway-oriented and community-oriented commercial centers exhibit a high and distinctive level of architectural character and site design character by adherence to policies in the land use and community design elements and established design guidelines.

### *Industrial and Business Parks*

- **CD-5.10** Require industrial projects to enhance their aesthetic quality, image, and "fit" with adjoining land uses. Elements may encompass site and entry identification by signage, landscape, or lighting; extensive on-site landscape; public art; improvements of abutting public streetscapes; and other amenities.

- **CD-5.11** Require that the renovation of existing buildings and new construction within industrial and business parks exhibit a high level of architectural and site design character by adherence to policies in the land use and community design elements, and established design guidelines.

### *Visual Resources*

- **CD-6.1** Ensure unobstructed view corridors or viewsheds of the San Bernardino, Santa Ana, and San Gabriel Mountains, the Chino and La Sierra Hills, and other significant natural features from public spaces such as parks, termination of streets and community trails, community centers, and school properties, where feasible, as part of the design of development projects.

- **CD-6.2** Require that project applicants identify and map all slopes greater than 15 percent on parcels within the City's hillside areas, referred to as the "Hillside Management District," in increments of 5 percent. Lands within this District shall be subject to administrative review to ensure that development is located and designed to reflect its distinct environmental and topographic characteristics consistent with the policies of this plan, under the provisions of a Hillside Development Ordinance.

- **CD-6.3** Require that development in hillside areas with greater than 25 percent slope be clustered on the most gently sloping portions of the site, to the extent feasible, according to the following density limitations of the underlying land use plan designations.

| Maximum Percentage of Site to be Graded | Maximum Percent of Allowable Density |
|---|---|
| 40-44.9% | 100% |
| 45-49.9% | 90% |
| 50-54.9% | 80% |
| 55-59.9% | 70% |
| 60-64.9% | 60% |
| 65-69.9% | 50% |
| 70-74.9% | 40% |
| 75-79.9% | 30% |
| 80-84.9% | 20% |
| 85+% | 10% |

- **CD-6.4** Require that projects be designed and sited to maintain the natural topographic, physiographic, and aesthetic viewshed characteristics of those features, utilizing the following conditions:

- Minimize the area and height of cuts and fills to the extent technically achievable, ensuring that slope tops and bottoms are rounded and facilitate a smooth and seamless transition where natural and built slopes intersect.
- Configure development sites to mimic predevelopment natural topography by clustering sites and individual units and avoiding extensive fragmentation of steep slopes, "stair stepping" and varying terraces of structures, and/or other design practices.
- Minimize the size of flat development pads in site grading to that necessary to accommodate the building footprint, a reasonable amount of useable outdoor space, and structural and site stability.
- Encourage building architectural design styles, forms and shapes, materials, and building siting to complement rather than visually dominate their landscape setting.
- Minimize the height of retaining walls, and design with smooth flowing forms that follow topography and with material colors and textures that blend in with the surrounding landscape.
- Plant hillside and canyon slopes with natural species of drought-tolerant plants to soften the visual impact of land grading, retaining walls, structures, and roads and maintain (to the extent feasible) natural vegetation.
- Restore disrupted vegetation, wildlife habitat, natural water courses, drainage swales, and other important viewshed features. Vegetation should be arranged in informal masses to create a textured slope characteristic of natural chaparral mountain slope terrain.

- **CD-7.1** Review, update, and expand the City's Scenic Highway Plan to keep visual resources associated with the City's highways and roadways current; consider designation roads along the City's hillsides bordering the City as potential candidates for scenic roads or highways.
- **CD-7.2** Regulate new development, substantial rehabilitation, or renovation projects through provisions that require an analysis of impacts of development on the quality of the City's designated highways and corridors.
- **CD-7.3** Prohibit installation or expansion of poles, billboards, and other above-ground appurtenances from detracting from the views along the City's scenic highways and corridors; phase out uses that impair scenic views..

## 5.11.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

### Impact 5.11-1: Project implementation would not divide an established community. [Threshold LU-1]

## General Plan

The proposed General Plan Update would improve connectivity and compatibility of potential future projects with existing uses, planned uses, the natural environment, and the City's SOI.

The Circulation Element of the proposed General Plan Update provides policies designed to ensure the prevention dividing communities, as a result of the construction of new or modified roadways. Policies in this element would also highlight complete streets network, where pedestrians and other mobility users of all ages and abilities would be accommodated safely, as well as bicycle and pedestrian networks. New development would be required to contribute to those improvements among others. The Circulation Element ensures the connectivity of active transportation routes, in order to prevent the division of established communities. The Land Use Plan would determine where growth would occur and the amount of allowable growth in Corona. Growth would occur on vacant land along the periphery, in approved specific plan areas and limited infill sites. For example, Policy CE-1.1 would limit street capacity to only serve expected demand on City streets, and CE-5.9 would create uninterrupted Class I bicycle routes through the City that connect to the Santa Ana River Trail.

The General Plan Update would not physically divide any of these communities; rather, the proposed project seeks to maintain and preserve the quality of Corona's existing communities.

## Climate Action Plan

The update to the City's Climate Action Plan (CAP) focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or intensity allowed by the proposed Land Use Plan or result in the creation of new roadways that have the potential to divide an established community. Measure 7-2 in the CAP would expand bicycle routes in the City and would help connect neighborhoods. Consequently, implementation of the City's CAP would not divide an establish community.

### Impact 5.11-2: Implementation of the proposed General Plan Update could conflict with the Corona Municipal Airport ALCUP. [Threshold LU-2]

The proposed project is an update to the Corona General Plan. The General Plan Update is intended to shape development within the City for subsequent years. The following is an analysis of the proposed project's consistency with the applicable state, regional and local laws, regulations, plans, and guidelines that were adopted for the purpose of avoiding or mitigating an environmental impact.

## General Plan

### *State Planning Law and California Complete Streets Act Consistency*

The General Plan Update has been prepared in accordance with state planning law, as provided in California Government Code Section 65300. The General Plan Update is meant to be a framework for guiding planning

and development. The update is comprehensive both in its geography and subject matter. It addresses the entire territory within the City's boundary and also addresses the full spectrum of issues associated with management of the City.

The General Plan Update is consistent with California Code Section 65302 because it addresses the eight elements (Land Use, Circulation, Housing, Conservation, Open Space, Noise, Safety, and Environmental Justice) listed under this code, as well as the required elements outlined in the OPR general plan guidelines. The General Plan Update would reorganize the current General Plan into six elements: Community Development, Circulation, Safety Hazards, Public Services and Facilities, Natural Resources, and Health and Wellness.

The General Plan Update also includes forecasts of long-term conditions; development goals and policies; exhibits and diagrams; and objectives, principles, standards, and plan proposals throughout the various elements. The proposed land use plan and the goals and policies in the General Plan Update strive to ensure the preservation and land use compatibility throughout the City. Additionally, the General Plan Update is consistent with AB 1358, the California Complete Streets Act of 2008, because Complete Streets in one of the key components in the proposed Circulation Element of the General Plan Update. For example, Policy CE-1.1 would limit street capacity to only serve expected demand on City streets, and CE-5.9 would create uninterrupted Class I bicycle routes through the City that connect to the Santa Ana River Trail, thereby reinforcing connectivity through a complete streets system.

Refer to Section 5.17, *Transportation*, for a detailed discussion of the proposed project's consistency with alternative modes of transportation. The proposed project's consistency with state planning law and the California Complete Streets Act is provided in the analysis for Impacts 5.17-1 and 5.17-2, and the City's mobility and circulation plan (as shown in Figures 5.17-2, *Transit Routes*, and 5.17-3, *Bikeway Plan*, and identified in Section 5.17, *Transportation*) provides for safe mobility for all users—bicyclists, pedestrians, transit riders, and motorists—appropriate to the function and context of each roadway.

Moreover, each of the specific applicable requirements in state planning law (California Government Code Section 65300) have been examined to determine if there are environmental issues within the community that the General Plan Update should address, including hazards and flooding. Such environmental issues (air quality, hazards, flooding, traffic, etc.) are addressed in their respective elements of the General Plan Update and topical sections of Chapter 5, *Environmental Analysis*, of this DEIR.

### *SCAG 2016-2040 RTP/SCS Consistency*

The Corona General Plan Update is considered a project of regionwide significance pursuant to the criteria outlined in SCAG's Intergovernmental Review Procedures Handbook (November 1995) and Section 15206 of the CEQA Guidelines. Therefore, this section addresses the proposed project's consistency with the applicable SCAG regional planning guidelines and policies. The proposed project's consistency with the applicable RTP/SCS goals are shown in Table 5.11-1, *Consistency with SCAG's 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy Goals*.

Table 5.11-1 SCAG's 2016–2040 RTP/SCS Consistency Analysis

| Goals | Consistency Analysis | Relevant General Plan Update Policies |
|---|---|---|
| RTP/SCS G1: Align the plan investments and policies with improving regional economic development and competitiveness. | Consistent. The General Plan is not a regional plan; however, the plan addresses economic growth within the City of Corona and its SOI. The Economic Development Element of the General Plan Update includes policies related to improving Corona's economy, such as increasing and retaining high-wage jobs to support Corona's residents. | • Policies ED-1.1 through ED-1.8 promote a strong and diversified economic base by attracting quality businesses and encouraging existing businesses to expand their sales, facilities, and employment.<br>• Policies ED-2.1 through ED-2.5 promote a growing and skilled labor force.<br>• Policies ED-4.1 through ED-4.5 ensure fiscal viability for the City by pursuing a diversified local and business base that provides growing sales and property tax revenues to pay for municipal operations.<br>• Policies ED-5.1 through ED-5.4 direct the City to pursue a range of financing opportunities to fund infrastructure and public facilities.<br>• Policies ED-6.1 through ED-6.4 direct the City to continue to invest in the City's development. |
| RTP/SCS G2: Maximize mobility and accessibility for all people and goods in the region. | Consistent. The Economic Development and Circulation Elements contain policies that provide guidance on improving connectivity for people and goods. The transportation networks in Corona would be designed, developed, and maintained to meet the local and regional transportation needs, in order to maximize efficient mobility and accessibility. Various regional and local plans and programs would be used to guide development and maintenance of transportation networks in the City, including but not limited to:<br><br>• City of Corona Neighborhood Traffic Management Program Community Handbook<br>• City of Corona and County of Riverside Traffic Impact Analysis Guidelines<br>• Caltrans Traffic Impact Studies Guidelines<br>• Caltrans Highway Capacity Manual<br>• SCAG's 2012 – 2035 RTP/SCS<br><br>Moreover, according to California Government Code, the City is required to coordinate its circulation element, the proposed Circulation Element, with regional transportation plans, including the RTP/SCS. The proposed Circulation Element is designed to be a comprehensive guide to transportation management strategies that address the capacity of long-term infrastructure. Refer to Section 5.17, *Transportation*, which addresses local and regional transportation, traffic, circulation, and mobility in more detail. | • Policies ED 1.4, ED-5.3, and ED-5.4 promote a strong and diversified economic base by attracting quality businesses and encouraging existing businesses to expand their sales, facilities, and employment and pursue a range of financing opportunities to fund infrastructure and public facilities.<br>• Policies CE-1.1 through CE-1.17 outline a roadway network of complete streets that provide accessibility for all users of all ages and abilities while maintaining context sensitivity to the land uses identified in the Land Use Element.<br>• Policies CE-2.1 through CE-2.5 outline a network of regional roadway facilities to ensure the safe and efficient movement of people and goods from within the City to areas outside its boundaries and that reduce regional cut-through traffic in the City.<br>• Policies CE-6.1 through CE-6.7 facilitate goods movement to support local commerce, while protecting residents and visitors from the negative effects of noise, vibration, and air pollution typically associated with truck operations and rail service. |

Table 5.11-1 SCAG's 2016–2040 RTP/SCS Consistency Analysis

| Goals | Consistency Analysis | Relevant General Plan Update Policies |
|---|---|---|
| RTP/SCS G3: Ensure travel safety and reliability for all people and goods in the region. | Consistent. The Circulation Element establishes policies that address improving travel safety such as emergency access, first/last mile connectivity, and bike and pedestrian safety. All modes of public and commercial transit throughout the City would be required to follow safety standards set forth by state, regional, and local regulatory documents. Roadways for motorists must follow safety standards established for the local and regional plans mentioned, above, in RTP/SCS Goal 2. | • Policies CE-1.1 through CE-1.17 provide a roadway network of complete streets that provide accessibility for all users of all ages and abilities while maintaining context sensitivity to the land uses identified in the Land Use Element.<br>• Policies CE-4.1 through CE-4.10 provide mobility for residents and encourage the use of public transportation as an alternative to automobile travel to reduce VMT.<br>• Policies CE-5.1 through CE-5.10 provide a convenient bikeway and pedestrians system to satisfy both recreational desires and transportation needs using a complete streets approach to accommodate users of all modes, abilities, and needs. |
| RTP/SCS G4: Preserve and ensure a sustainable regional transportation system. | Consistent. Improvements to the existing transportation network must be assessed with some level of traffic analysis in order to determine how proposed developments would impact existing traffic capacities, and to determine the needs for improving future traffic capacities. This is ensured through the permitting process and development review established by the City.<br><br>The regional plans stated in the analysis for RTP/SCS Goal G2, above, as well as Assembly Bill 1358 (California Complete Streets Act) would also be applicable to the design and development to the regional roadway network. The Land Use, Economic Development, and Circulation Elements of the proposed General Plan Update would encourage regional coordination of transportation issues, as well as provide guidance and policies that help preserve and ensure a sustainable regional transportation system. | • Policy ED-5.4 directs the City to pursue a variety of funding approaches, including impact fees, assessments, transportation funds, and other programs to revitalize and upgrade infrastructure.<br>• Policies CE-1.1 through CE-1.17 provide a roadway network of complete streets that provide accessibility for all users of all ages and abilities while maintaining context sensitivity to the land uses identified in the Land Use Element.<br>• Policies CE-4.1 through CE-4.10 provide mobility for residents and encourage the use of public transportation as an alternative to automobile travel to reduce VMT.<br>• Policies CE-5.1 through CE-5.10 provide a convenient bikeway and pedestrians system to satisfy both recreational desires and transportation needs using a complete streets approach to accommodate users of all modes, abilities, and needs.<br>• Policy LU-18.8 provides pedestrian and multi-modal transportation connections and improvements that link North Main Street uses to the Metrolink station |

Table 5.11-1 SCAG's 2016–2040 RTP/SCS Consistency Analysis

| Goals | Consistency Analysis | Relevant General Plan Update Policies |
|---|---|---|
| RTP/SCS G5*:* Maximize the productivity of our transportation system. | Consistent. The City of Corona Public Works Department provides efficient and cost-effective services involving engineering, land development, transportation, and traffic within the public right-of-way.<br><br>The City is served by numerous public transit routes provided by Riverside Transit Agency (RTA), which offers bus routes within Corona, as well as connecting services to OTCA, MetroLink, and Corona Cruiser. The City of Corona Public Works Department provides the Corona Cruiser and Dial-A-Ride services. Figure 5.17-2, Transit Routes and Figure 5.17-3, *Bikeway Plan,* show the how the City and its SOI would be served by bicycle and transit routes.<br><br>Moreover, the Circulation Element of the proposed General Plan Update contains guidance and policies to improve the transportation system in the City and its SOI. The local and regional transportation system would be improved and maintained to maximize efficiency and productivity in accordance with the goals and policies identified in the General Plan Update. | • Policies ED-5.3 and ED-5.4 direct the City to pursue a range of financing opportunities to fund infrastructure and public facilities.<br>• Policies CE-3.1 though CE-3.3 maximize the efficiency of the circulation system through the use of transportation system management strategies.<br>• Policies CE-4.1 through CE-4.10 provide mobility for residents and encourage the use of public transportation as an alternative to automobile travel to reduce VMT.<br>• Policies CE-5.1 through CE-5.10 provide a convenient bikeway and pedestrians system to satisfy both recreational desires and transportation needs using a complete streets approach to accommodate users of all modes, abilities, and needs.<br>• Policies CE-6.1 through CE-6.14 facilitate goods movement to support local commerce, while protecting residents and visitors from the negative effects of noise, vibration, and air pollution typically associated with truck operations and rail service.<br>• Policy HC-5.3 encourages public transit providers to establish and maintain routes that allow access from underserved areas to appropriate public facilities, services, and amenities. |
| RTP/SCS G6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking). | Consistent. Implementation of the General Plan Update would introduce policies and actions that address the importance of protecting the health of residents and the environment by improving air quality and encouraging active transportation.<br><br>The proposed project would encourage active transportation, such as bicycling and walking, through policies throughout the General Plan Elements. Additionally, as shown in Figure 5.17-3, *Bikeway Plan*, the City and its SOI would be served by future bicycle routes. | • Policy LU-18.8 provides pedestrian and multi-modal transportation connections and improvements that link North Main Street uses to the Metrolink station.<br>• Policies CE-5.1 through CE-5.10 provide a convenient bikeway and pedestrians system to satisfy both recreational desires and transportation needs using a complete streets approach to accommodate users of all modes, abilities, and needs.<br>• Policies HC-2.1 and HC-2.2 protect residents, business, and visitors from exposure to pollution and improvement of air quality for the community.<br>• Policies ER-12.5 through ER-12.9 improve air quality within the Corona Planning Area reducing vehicle trips. |

Table 5.11-1 SCAG's 2016–2040 RTP/SCS Consistency Analysis

| Goals | Consistency Analysis | Relevant General Plan Update Policies |
|---|---|---|
| RTP/SCS G7: Actively encourage and create incentives for energy efficiency, where possible. | Consistent. Implementation of the General Plan Update would introduce policies and actions that encourage energy efficiency throughout Corona. The Land Use Element promotes sustainability in the planning, design, and construction of developments. The Environmental Resources Element includes policies that reduce energy consumed from commercial and residential uses by requiring the use and installation of energy conservation features in all new construction projects and wherever feasible, retrofitting existing and redevelopment projects. | • Policies ER-12.10 through ER-12.13 implement efficient land use planning and construction practices, and energy conservation.<br>• Policies LU-6.1 and LU-6.2 promote sustainability in the planning, design, and construction of developments to create a more livable community and achieve broader economic and environmental objectives. |
| RTP/SCS G8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation. | Consistent. See responses to RTP/SCS Goals G5 and G6. | See relevant policies in Goals G5 and G6. |
| RTP/SCS G9: Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies. | Consistent. See response to RTP/SCS Goal G3 and G4. | See relevant policies in Goals G5 and G6. |

Source: 2016–2040 SCAG Regional Transportation Plan/Sustainable Communities Strategy (SCAG 2016).

### *Airport Land Use Compatibility Plan*

Airport operations and their accompanying noise and safety hazards require careful land-use planning on adjacent and nearby lands to protect the residential and business communities in Corona from the potential hazards that could be created by airport operations. Airport operations and their accompanying safety and noise hazards are discussed in detail in Section 5.9, *Hazards and Hazardous Materials*, and Section 5.13, *Noise*, of this DEIR.

ALUC review is required for adoptions of, or amendments to a General Plan or Specific Plan; zoning ordinance; Master Plan for public use airports; and heliports within the airport influence area (Public Utilities Code Sections 21676(b), 21676(c), 21664.5, and 21661.5). ALUC review is also required for discretionary projects if the ALUC has not yet determined that the General Plan is consistent with the ALUCP or the local agency has overruled the ALUC (Public Utilities Code Section 21676.5). Table 5.11-2, *Riverside County ALUC Policies and Proposed General Plan Update Consistency,* identifies that consistencies of the proposed General Plan Update with the Riverside County ALUC policies.

Table 5.11-2 Riverside County ALUC Policies and Proposed General Plan Update Consistency

| RCALUC Policies | | | Consistency of ALUC Policies with Proposed General Plan Update |
|---|---|---|---|
| Residential Land Use | Compatibility Zone D | No inconsistencies noted | No inconsistencies. |
| Non-Residential Land Use | Compatibility Zone C | Potential Conflict: Zone C intensity limits (75 people/acre) apply to area designated as Light Industrial/Warehousing southeast of airport [C1] | There are 44.8-acres, either within or partially within the Compatibility Zone C have industrial land with employment-generating uses. Within the 44.8 acres, there are a total of 668 employees. The highest existing employment density within the parcels that make up Airport Compatibility Zone C is 21 employees/acre, which is substantially less than the maximum employment density outlined in ALUC policies. Therefore, there are no inconsistencies.<br><br>Currently, the eastern portion of Butterfield Park falls within the Airport Compatibility Zone C. This portion of the park includes a baseball field, a softball field, a maintenance shed, picnic tables, and part of a play area. The portions of the park that are within the Compatibility Zone Z would not have a density of 75/people or more. Therefore, there are no inconsistencies. |
| | Compatibility Zone D | Potential Conflict: Zone D intensity limits (100 people/acre) apply to various undeveloped parcels designated as Light Industrial/Warehousing south and southeast of airport [C2] | Given that the employment densities in Zone C are substantially lower than the maximum intensity limit, it is unlikely that the employment density in Zone D is above the intensity limit of 100 employees/acre. Therefore, there are no inconsistencies. |
| Other Policies | General Plan | No acknowledgement of ALUC coordination.<br>City standard of 65 dB CNEL for new residential development conflicts with ALUC criterion of 60 dB CNEL; however, no lands within the 60 dB CNEL contour are designated for residential use | As no land within the 60 dB CNEL contour is designated residential, there would be no conflicts with the established ALUC criterion. Therefore, there are no inconsistencies. |
| | Zoning Code | No airport-related height limit | As there are no airport-related height limits established, the Citywide height limit would not conflict with this criterion. Therefore, there are no inconsistencies. |

Source: Riverside County 2004.

Pursuant to California Public Utilities Code Section 21676, local governments are required to submit all general plan and zoning amendments that occur in the ALUC planning areas for consistency review by ALUC. Since the proposed project includes an update to the City's General Plan and the City falls within the ALUCP for Corona Municipal Airport, a determination of consistency with the ALUCP by ALUC is required prior to the Corona City Council taking action on the project. If deemed inconsistent with the ALUCP, the City may override the ALUC decision by a two-thirds vote of its governing body, if it makes specific findings that the proposed action is consistent with the purposes of this article stated in Section 21670 of the Public Utilities Code. The purpose stated in Section 21670(a)(2) is "to protect public health, safety, and welfare by ensuring the

orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards in areas around public airports to the extent that these areas are not already devoted to incompatible uses." If the City does not overrule the determination, but nevertheless adopts the General Plan, ALUC may require the City to submit all land use actions to it for review and determination.

The proposed project would not result in changes to land use designations, density, or intensity levels compared to the 2004 General Plan. Therefore, although Table 5.11-2 indicates that there are no inconsistencies in the proposed General Plan Update, the 2004 General Plan was previously identified by the ALUC as conflicting with the ALUCP. As a result, it is possible that the ALUC may identify inconsistencies between the City's General Plan Update and the ALUCP. The City of Corona has the ability to overrule the ALUC's determination by a two-thirds vote of the City Council. If the City does not overrule the determination, but nevertheless adopts the General Plan, the ALUC may require the City to submit all land use actions to it for review and determination. However, as the determination of consistency of the proposed project with the ALUCP by the ALUC would not occur until after the Draft EIR is circulated and the ALUC identifies the potential inconsistencies, this impact is conservatively considered significant and unavoidable.

***Conclusion***

Based on this review and the analysis provided in Sections 5.9, *Hazards and Hazardous Materials*, and 5.13, *Noise*, of this DEIR, the proposed project land uses within the airport influence area of the Corona Municipal Airport would be generally consistent with the ALUCP. However, the ALUC is required to make a determination of consistency of a project with the ALUCP and Caltrans health and safety standards, which would occur prior to the adoption. Based on this review and Section 5.9 of the EIR, the City of Corona has determined that the proposed project is consistent with ALUCP and Caltrans health and safety standards. However, the proposed project has not yet been before the ALUC for a determination of consistency. If the ALUC determines that the proposed project is not consistent with the ALUCP for the Corona Municipal Airport, and the Corona City Council overrides this finding by a two-thirds vote, a significant unavoidable adverse impact would result and a Statement of Overriding Considerations would be required. Therefore, this impact is conservatively considered significant.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or intensity allowed by the proposed Land Use Plan or interfere with the ALUCP. Consequently, implementation of the City's CAP would result in less than significant impacts to land use and planning

## 5.11.5 Existing Regulations and Standard Conditions

### State

- California Government Code Section 65300 (State Planning Law)

### Local

- City of Corona Municipal Code

## 5.11.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.11-1.

Without mitigation, the following impact would be **potentially significant**:

- **Impact 5.11-2** The proposed project could conflict with the Corona Municipal Airport ALCUP.

## 5.11.7 Mitigation Measures

### Impact 5.11-2

The General Plan includes policies to ensure consistency with the Corona Municipal Airport ALUCP. No additional mitigation measures are feasible.

## 5.11.8 Level of Significance After Mitigation

### Impact 5.11-2

The proposed project land uses within the airport influence area of the Corona Municipal Airport would be generally consistent with the Riverside County ALUCP for the Corona Municipal Airport. However, the ALUC is required to make a determination of consistency of a project with the ALUCP and Caltrans health and safety standards, which would occur prior to the adoption. The City of Corona has determined that the proposed project is generally consistent with ALUCP. However, the proposed project has not yet been before the ALUC for a determination of consistency. If the ALUC determines that the proposed project is not consistent with the AELUP for the Corona Municipal Airport, and the Corona City Council overrides this finding by a two-thirds vote, a significant unavoidable adverse impact would result and a Statement of Overriding Considerations would be required. Therefore, Impact 5.11-2 is conservatively considered significant and unavoidable.

## 5.11.9 References

Riverside County Airport Land Use Commission (RCALUC). 2004, October. Background Data: Corona Municipal Airport and Environs. http://www.rcaluc.org/Portals/13/PDFGeneral/plan/newplan/35-%20Vol.%202%20Corona%20Municipal.pdf

Southern California Association of Governments (SCAG). 2016, April 7, 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future. http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

———. 2017, September. Eligible SCAG HQTA (2040) Communities – Riverside County, Northwest Riverside County. http://sustain.scag.ca.gov/Documents/HQTA/Maps/RIV_Northwest_scagHQTAeligible.pdf.

# 5. Environmental Analysis
## LAND USE AND PLANNING

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# 5.12 MINERAL RESOURCES

## 5.12.1 Environmental Setting

Minerals are defined as any naturally occurring chemical elements or compounds, formed from inorganic processes and organic substances. Minable minerals or an "ore deposit" is defined as a deposit of ore or mineral having a value materially in excess of the cost of developing, mining and processing the mineral and reclaiming the project area. The conservation, extraction, and processing of mineral resources are an integral part of development and economy of the City.

### 5.12.1.1 REGULATORY FRAMEWORK

#### State Regulations

##### *Surface Mining and Reclamation Act (SMARA)*

California's Surface Mining and Reclamation Act of 1975, referred to as SMARA, was enacted to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. Requirements for SMARA are codified under PRC §§ 2710 et. seq. Under state law, all mining operations are required to obtain permits prior to commencing operations and abide by local and state operating requirements. Mining operations are also required to have appropriate reclamation plans in place, provide financial assurances, and abide by state and local environmental laws.

***Classification***

The California Geological Survey Mineral Resources Project provides information about California's non-fuel mineral resources. The Mineral Resources Project classifies lands throughout the State that contain regionally significant mineral resources per SMARA. Non-fuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt and dimension stone; and construction aggregate including sand, gravel, and crushed stone. Development generally results in a demand for minerals, especially construction aggregate. Urban preemption of prime deposits and conflicts between mining and other uses throughout California led to passage of the SMARA which requires all cities and counties to incorporate in their General Plans the mapped designations approved by the State Mining and Geology Board.

The classification process involves the determination of Production-Consumption (P-C) Region boundaries, based on identification of active aggregate operations (Production) and the market area served (Consumption). The P-C regional boundaries are modified to include only those portions of the region that are urbanized or urbanizing and are classified for their aggregate content. An aggregate appraisal further evaluates the presence or absence of significant sand, gravel, or stone deposits that are suitable sources of aggregate. The classification of these mineral resources is a joint effort of the state and the local governments. It is based on geologic factors and requires that the State Geologist classify the mineral resources area as one of the four Mineral Resource Zones (MRZs), Scientific Resource Zones (SZ), or Identified Resource Areas (IRAs), described below.

- **MRZ-1:** A Mineral Resource Zone where adequate information indicates that no significant mineral deposits are present or likely to be present.
- **MRZ-2:** A Mineral Resource Zone where adequate information indicates that significant mineral deposits are present, or a likelihood of their presence and development should be controlled.
- **MRZ-3:** A Mineral Resource Zone where the significance of mineral deposits cannot be determined from the available data.
- **MRZ-4:** A Mineral Resource Zone where there is insufficient data to assign any other MRZ designation.
- **SZ Areas:** Containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance shall be classified in this zone.
- **IRA Areas:** County or State Division of Mines and Geology Identified Areas where adequate production and information indicates that significant minerals are present.

As part of the classification process, an analysis of site specific conditions is utilized to calculate the total volume of aggregates within individually identified Resource Sectors. Resource Sectors are those MRZ-2 areas identified as having regional or statewide significance. Anticipated aggregate demand in the P-C Regions for the next 50 years is then estimated and compared to the total volume of aggregate reserves identified within the P-C Region.

#### *Designation*

Once a classification report has been completed, the State Mining and Geology Board, may choose, based on recommendations from the State Geologist, to proceed with the second step in SMARA's mineral land identification process, designation of those mineral deposits that are of regional or statewide significance. In contrast to classifications, which inventories mineral deposits without regard to land use or land ownership, the purpose of a designation is to identify those deposits that are potentially available from a land-use perspective, and are of prime importance in meeting future needs of the region or State.

## Local Laws

### *City of Corona Municipal Code*

The Corona Municipal Code, Title 19, *Surface Mining and Regulations*, is intended to regulate surface mining operations and reclamation plans in accordance with SMARA. The ordinance was intended to ensure that: (1) subsequent beneficial uses of mined and reclaimed land are promoted and the land is returned to a usable condition; (2) groundwater supply, recreation, watershed, wildlife, range and forage, and aesthetic enjoyment are given appropriate consideration in the planning process; and 3) the production and conservation of mineral resources are encouraged. The ordinance addresses: surface mining permits and reclamation plans, minimum site performance standards, annual inspections and financial security, and enforcement. The municipal code requires a Mineral Resource Overlay on all lands identified for mineral resource protection in Corona and its

sphere of influence. As required by state law, the City adopted required local regulations pursuant Ordinance No. 2386, which was certified by the State Mining and Geology Board in 1999.[1]

### 5.12.1.2 EXISTING CONDITIONS

Mining has been a part of Corona's history since 1888, when the Temescal Rock Quarry was opened to furnish rock for streets in Los Angeles and nearby towns. Later decades saw oil and gas drilling in the Prado-Corona fields and Temescal Canyon. Looking forward, the conservation, extraction, and processing of mineral resources will be essential to meeting the needs of the region, the City's economy, and the industries that depend on them.

#### Mineral Resources

The City of Corona and SOI are in the Temescal Valley Production Area (TVPA), an 820-square-mile area designated by the California Geological Survey (CGS) and bounded by the Santa Ana Mountains on the west and the Perris Plateau to the east. Included are the Santa Ana River Valley, Chino Hills, and Jurupa Mountains to the north; the east slopes of the Santa Ana Mountains; and the Elsinore Mountains to the west. It also includes the western and southern part of Perris Valley and the drainage of the Santa Margarita River system. The TVPA consists of a mix of rugged mountain terrain, rolling hillsides, alluvial valley floors, and river bottoms.

Temescal Valley is known for its mineral resource deposits. Portions of the City and its SOI are designated by the state as a "Construction Aggregate Resource Area." These mineral resources generally consist of clay and construction aggregates—crushed rock, sand, and gravel. Much smaller amounts of silver, lead, zinc, coal, and gypsum have also been identified in the City limits and SOI. These mineral resources are briefly summarized (CDC 1991, CGS 2014):

- **Rock Products.** The TVPA is rich in aggregate resources. Crystalline, sedimentary, and metasedimentary rocks are prevalent and have been designated by the state as significant mineral deposits that have regional importance. Most of these mineral resources are in the City's SOI. Metasedimentary rocks found include quartzite, argillite, and limestone. Crystalline rocks quarried in this area include quartz latite porphyry, granodiorite, and quartz monzonite.

- **Clay Production.** Corona's SOI includes the oldest and most productive clay district in southern California, dating to the 1890s. Currently within the City limits is one known clay resource site classified MRZ-2. Discovered in 1975, this site is known as the Dominguez Mine and is south of the Sierra Del Oro Specific Plan area. The bulk of clay goes into the production of roofing and patio tile.

- **Sand and Gravel.** Corona's sand and gravel resources include stream deposits and deposits in older geologic formations. Stream deposits include stream-channel deposits and flood-plain deposits adjacent to

[1] Ordinance 2386, an ordinance of the City of Corona, to comprehensively amend Title 19 of the Corona Municipal Code relating to standards and requirements for surface mining operations and the reclamation thereof in accordance with the Surface Mining and Reclamation Act of 1975.

the active channel. Sand and gravel are occasionally produced from deposits of intrusive granitic or volcanic rock, typically in the hills and mountains east of Temescal Valley.

- **Other Minerals.** Other minerals have been identified in the hills east of Temescal Wash and in the Santa Ana Mountains south of Corona. Tin, copper, silver, and gold have all been discovered, but not in the quantities necessary for economic viability. Quartz latite porphyry—used for roofing granules—is found in the area just north of Cajalco Road. Additionally, a high-grade silica sand deposit is exposed just southeast of Corona in the Bedford Canyon Area.

### *Active Mines in Corona*

The City of Corona and Temescal Valley have been the location for extensive mining in the past; more than 75 mines have operated in Corona and its SOI. However, many of these mines are no longer in operation. As of 2017, Corona has two active mining operations (All American Asphalt and Vulcan/Calmat), and the SOI has ten active mining operations. Table 5.12-1, *Active Mining Operations in Corona*, lists the active mines, their permits, materials mined, reserves, and annual production.

Table 5.12-1 Active Mining Operations in Corona

| Mine Name | Mine ID / RC Case | Permit Acres | Materials Mined | Reserves; MT=mil tons | Max. Annual Production |
|---|---|---|---|---|---|
| Mines in Corona | | | | | |
| All American Asphalt | 91-33-0005 SMP90-1, SMP2017-0101 | 263 | Sand & Gravel | N/A | N/A |
| Corona Quarry (CalMat/Vulcan) | 91-33-0027 SMP12-001 | 260 | Sand & Gravel | 400 MT | 5 MT |
| Mines in Sphere of Influence | | | | | |
| 3M Corona | 91-33-0016 RCL00136 | 1,320 | Specialty Sand | 5 MT | 0.5–2.0 MT |
| Chandler-Coldwater | 91-33-0014 RVP00135 | 75 | Sand & Gravel | 67 MT | 0.6 MT |
| Chandler-Sierra Plant | 91-33-0011 SMP00202 | 198 | Sand & Gravel | 64 MT | 2.2 MT |
| Mobile Sand Company | 91-33-0007 SMP00119 | 75 | Sand & Gravel | 1.3 MT | 0.4 MT |
| Eagle Valley | 91-33-0035 SMP00152R1 | 128 | Sand & Gravel | 65.6 MT | 1.6 MT |
| Mayhew Canyon | 91-33-0039 SMP00139R1 | N/A | Sand & Gravel | 46 MT | 2.0 MT |
| Ben's Mine/ Mission Clay | 91-33-0034 RCL00135 | 67 | Clay | 7 MT | 0.25 MT |

Table 5.12-1 Active Mining Operations in Corona

| Mine Name | Mine ID / RC Case | Permit Acres | Materials Mined | Reserves; MT=mil tons | Max. Annual Production |
|---|---|---|---|---|---|
| Harlow Quarry / Robertsons | 91-33-0061 RCL00118 | 59 | Sand & Gravel | 13.3 MT | 5,000 Tons |
| Corona Clay Pit / USA Waste | 91-33-0074 SMP00175R1 | 25 | Clay | N/A | N/A |
| Glen Ivy #1 / Werner | 91-33-0001 SMP00143 | 115 | Sand & Gravel | 26.2 MT | 0.75 MT |

Source: CDC 2017

### *Mineral Resource Classification Zones*

Corona has been extensively mapped by the CGS, and lands have been assigned classifications for mineral resources. The City is primarily underlain by MRZ-2 lands, which are known to contain valuable mineral resources, specifically construction aggregate and industrial minerals. While much of that area has already been developed, extensive resources still exist in the Gavilan Hills and in southwest Corona. A large portion of the aggregate resources has also been designated by the state as regionally significant.

California general plan law requires that a city develop policies and programs that address the use, management, and preservation of significant mineral resources. In 1990, the City of Corona developed a three-part classification system for MRZ-2 lands to meet the requirements of state law while accommodating development interests in the City (Corona 1990). These policies and programs were folded into the 2004 General Plan and allow for the continued use of identified mineral resources in the City and its SOI.

Table 5.12-2, *Mineral Resource Zones in Corona*, provides an inventory of lands in Corona that fall under a mineral land use classification by CGS. Figures 5.12-1, *Mineral Resources Construction Aggregate*, and 5.12-2, *Mineral Resources Industrial Minerals*, illustrate the location of industrial mineral and aggregate resources in Corona. Industrial mineral deposits are in the southern portion of Corona and its SOI. Aggregate deposits are east of the I-15 and in the City's southernmost SOI. Many of the City's aggregate deposits have also been designated as regionally significant by the California State Mining and Geology Board (Figure 5.12-3, *Areas of Mineral Resource Significance*).

Table 5.12-2 Mineral Resource Zones in Corona

| Mineral Resource Zone Classifications | City of Corona (Acres) | Sphere of Influence (Acres) | General Plan Planning Area (Acres) |
|---|---|---|---|
| Construction Aggregate | | | |
| MRZ-1 | 61 | 197 | 258 |
| MRZ-2 | 1,869 | 2,527 | 4,396 |
| MRZ-3 | 23,620 | 13,791 | 37,411 |
| Industrial Minerals | | | |
| MRZ-2a | 124 | 704 | 828 |
| MRZ-3a | 2,183 | 1,647 | 3,830 |
| MRZ-3b | 2,171 | 2,266 | 4,437 |
| MRZ-4 | 21,073 | 11,897 | 32,970 |

Source: CDC 2014

## 5.12.2 Thresholds of Significance

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

M-1 Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

M-2 Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

## 5.12.3 Relevant General Plan Policies

The following are relevant policies from the Environmental Resources Element of the Corona General Plan Update, which may contribute to reduce potential mineral resources impacts as a result of implementation of the proposed project.

### Environmental Resources Element

#### *Agricultural, Mineral, and Air Resources*

- **ER-10.1** Maintain the use of the city's Mineral Resource Overlay Zone in the City's Zoning Ordinance to ensure lands having a state classification of MRZ-2 through the Department of Conservation have the opportunity to be made available for mineral materials.

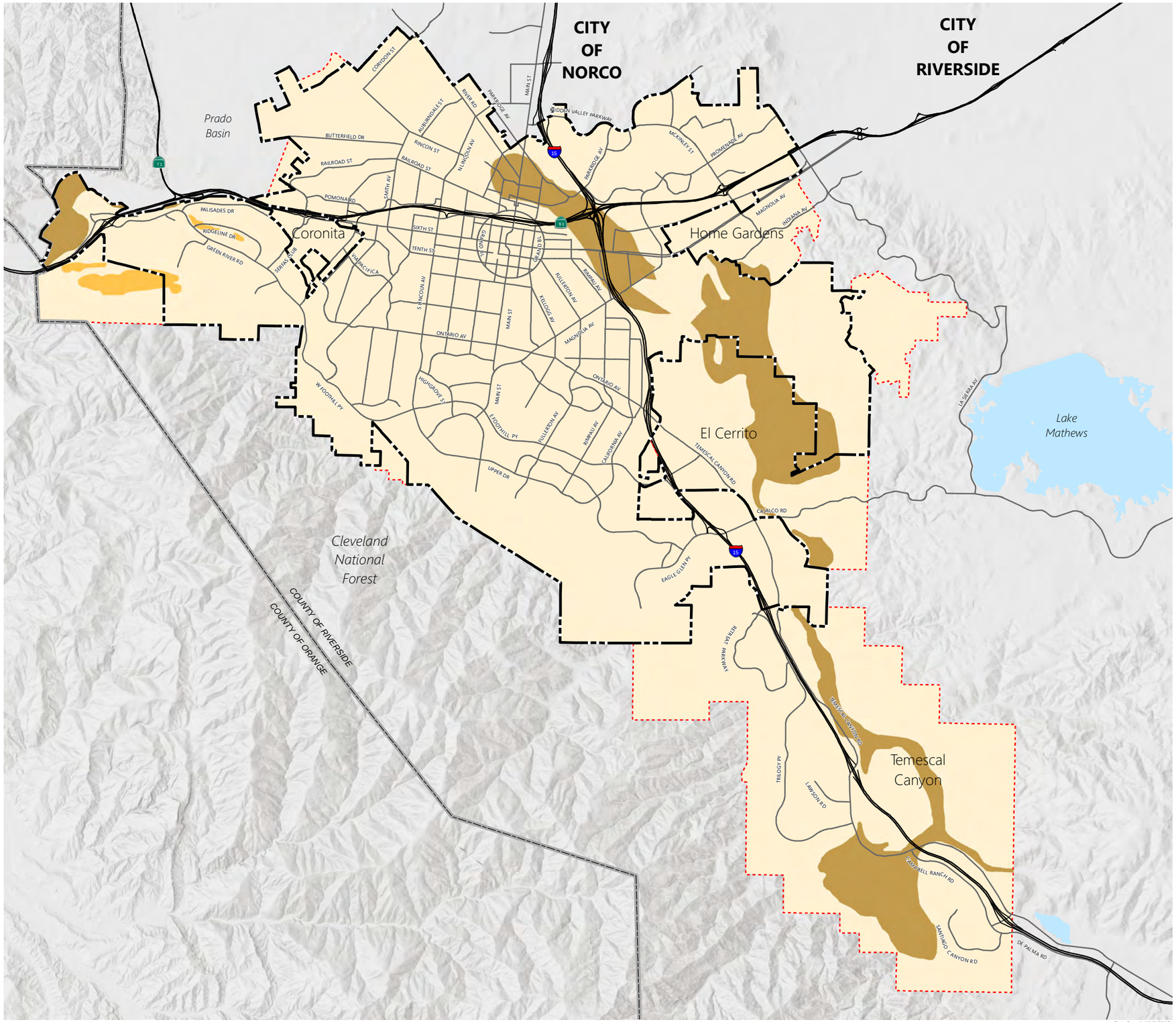


Figure 5.12-1

# MINERAL RESOURCES CONSTRUCTION AGGREGATE

Legend

- City Boundary
- Sphere of Influence Areas

**Construction Aggregate**

- MRZ-1
- MRZ-2
- MRZ-3

*Source:*
*California Department of Conservation, Division of Mines and Geology, 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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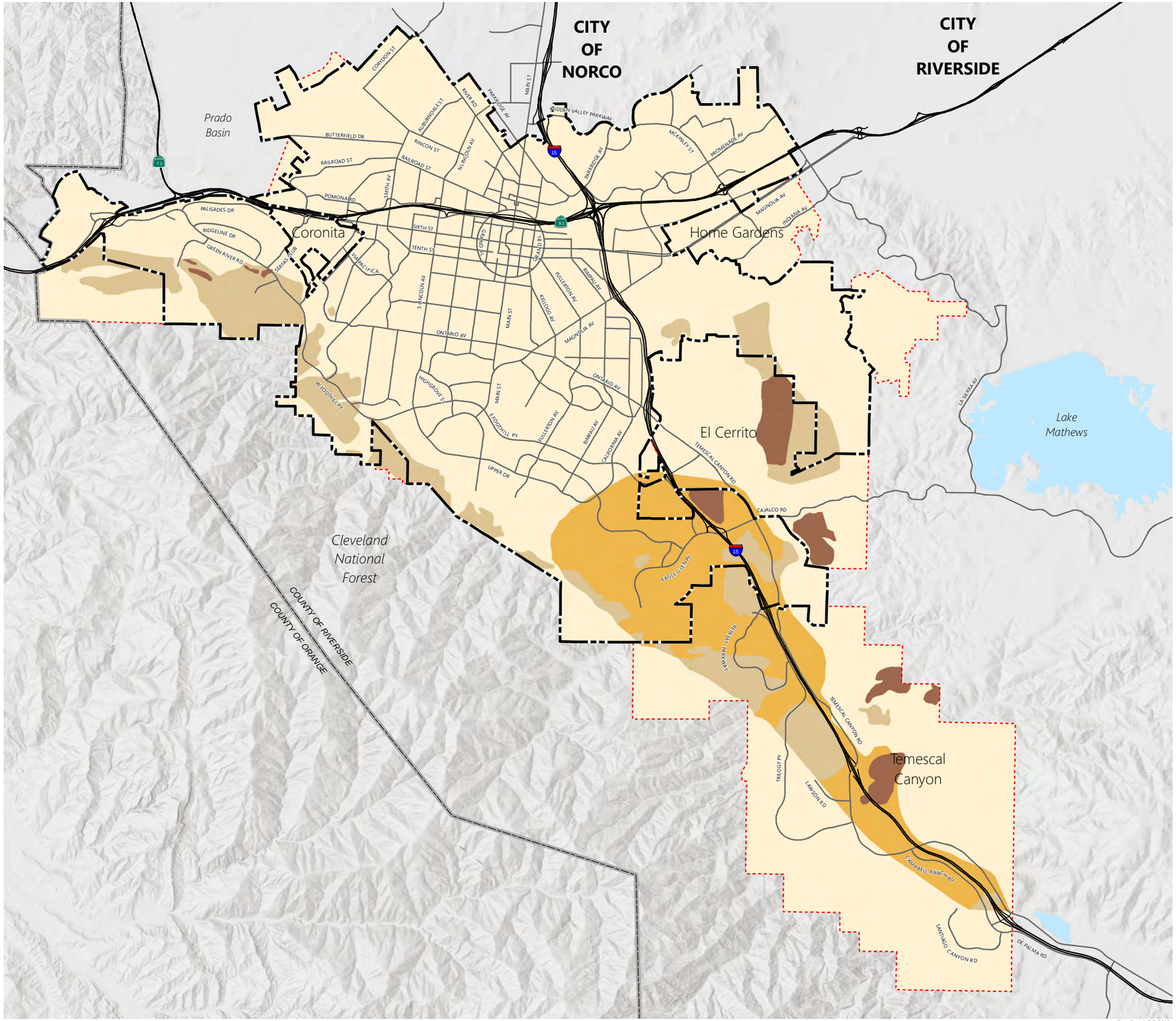


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Figure 5.12-2

# MINERAL RESOURCES INDUSTRIAL MINERALS

Legend

- City Boundary
- Sphere of Influence Areas

**Industrial Minerals**

- MRZ-2a
- MRZ-3a
- MRZ-3b
- MRZ-4

*Source:*
*California Department of Conservation, Division of Mines and Geology, 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

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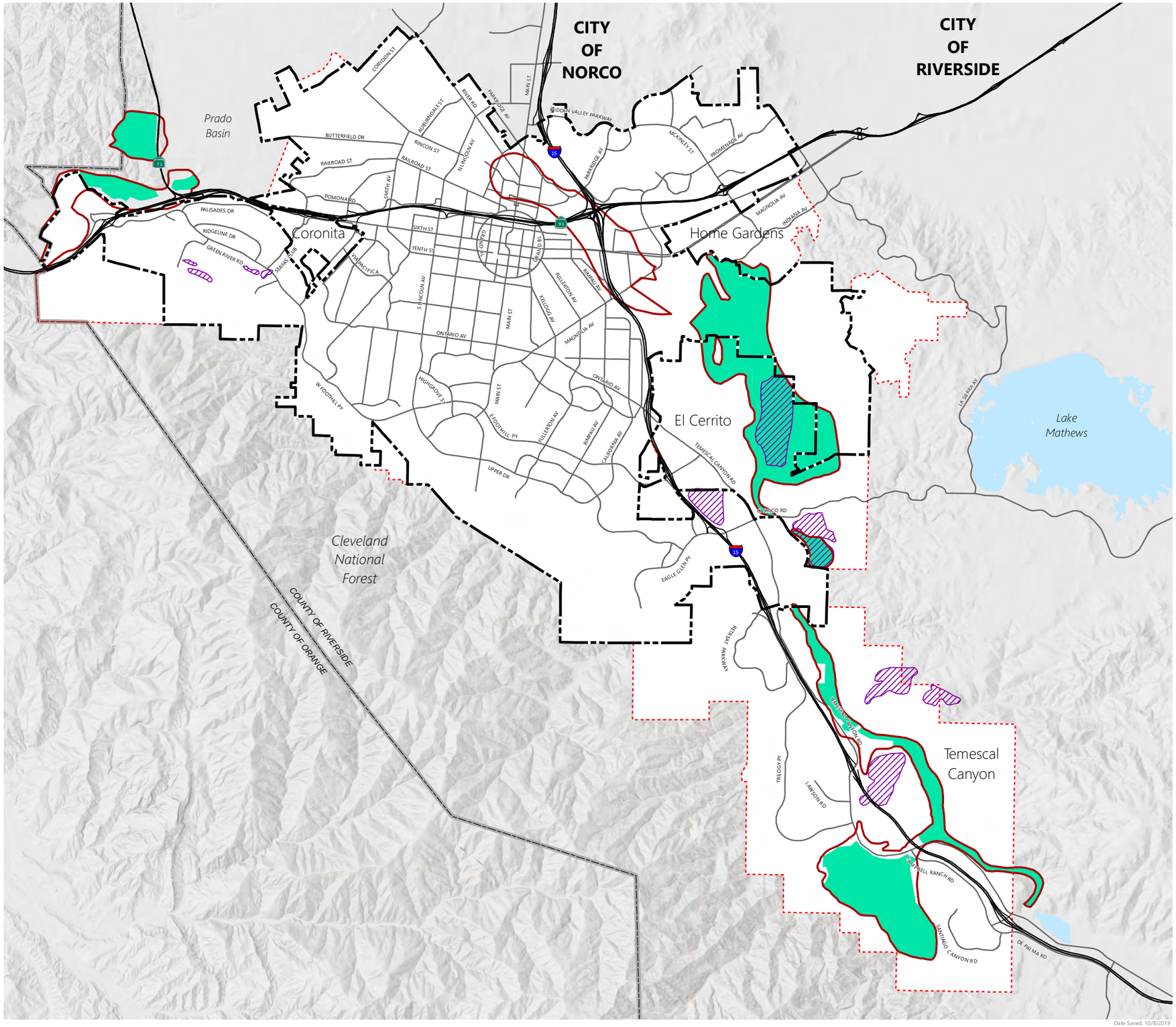


Figure 5.12-3

# AREAS OF MINERAL RESOURCE SIGNIFICANCE

Legend

- City Boundary
- Sphere of Influence Areas
- Classified Aggregate Minerals
- Classified Industrial Minerals
- Designated Aggregate Resources

*Source:*
*California Department of Conservation, Division of Mines and Geology, 2017*

Date Saved: 10/8/2019

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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- **ER-10.2** Allow land classified MRZ-2 and zoned with a MR Overlay to be rezoned for another land use when significant mineral deposits no longer exist, are no longer economically viable to mine, or the conditions of the approved mining permit and/or reclamation plan prohibit any additional mining in a specific area.

- **ER-10.3** Adopt the making of certain findings required by Section 2764(b) of the Surface Mining and Reclamation Act for land known to have MRZ-2 resources but not protected for mineral materials by City Council resolution.

- **ER-10.4** Permit through the city's Surface Mine Permit process the extraction of mineral resources or exploration of mining in resource areas identified by the MR Overlay Zone consistent with the general plan land use designation.

| General Plan Designations | Compatible |
|---|---|
| General Industry | Yes |
| Open Space General | Yes |
| Agriculture | Yes |
| Utility | Yes |

- **ER-11.1** All development proposals for mineral extraction—including borrow material—and all reclamation plans shall be subject to discretionary approval by the Corona Planning Commission and City Council.

- **ER-11.2** Require that all mineral extraction projects and reclamation plans and projects be subject to and consistent with the requirements of the California Environmental Quality Act and the Surface Mining and Reclamation Act.

- **ER-11.3** Require that permits for mineral reclamation projects demonstrate compliance with State, Federal and local standards and attainment programs with respect to air quality; protection of rare, threatened, or endangered species; conservation and protection of water quality, watersheds and basins; erosion protection; and significant viewsheds, hillside, and aesthetic resources.

- **ER-11.4** Provide for the restoration and reuse of the surface mining site upon completion of the extraction and production activities in a manner that is sensitive to and compatible with the character and integrity of adjacent land uses and the natural environment.

- **ER-11.5** All mining operations that have a valid mining permit and reclamation plan approved by the County of Riverside or a vested mining operation per Section 2776 of the Surface Mining Reclamation Act shall be deemed valid when annexed into the City's corporate boundaries. However, any significant modifications, renewal, or extension of County-issued permits or reclamation plans shall be issued and processed by the City of Corona. Significant modifications are those that would create significant new or increased impact on the environment or adjacent land uses.

- **ER-11.6** The City shall endeavor to avoid conflicts between urban uses and mineral uses. Analysis of potential conflicts shall be part of the City's planning process. Conflicting or incompatible land uses should not be allowed in mineral resource areas that are designated "MR."

- **ER-11.7** New or significant expansions of surface mines shall be thoroughly evaluated through the city's surface mine permit and environmental review process to determine the potential impacts the operation may have on nearby land uses, water quantity and quality, noise and vibration, air quality, aesthetics (including buffers and screening), and traffic and that applicable mitigation measures are adopted to reduce the impacts on the environment.

- **ER-11.8** Existing development, including commercial and residential, shall be protected from adverse environmental effects caused by mining by requiring appropriate conditions of mining operation approval and enforcing use permit conditions and mitigation measures.

- **ER-11.9** Any proposed development, including land divisions and dwelling unit construction, located adjacent to or within 1,000 feet of the boundary of an MR Overlay Zone shall provide a suitable buffer or other design considerations based upon topographic, geologic, aesthetic, or seismic and other factors related to the property and proposed uses.

## 5.12.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.12-1: Project implementation would result in the loss of availability of a known mineral resource. [Thresholds M-1 and M-2]**

### General Plan

The City is primarily underlain by MRZ-2 lands, which are areas where adequate information indicates that significant mineral deposits are present, or there is a high likelihood that their presence exists (see Figure 5.12-1 and Figure 5.12-2). Figure 5.12-3, *Areas of Mineral Resources Significance*, shows the MRZ-2 areas that have been designated as being of either regional (multi-community) or statewide economic significance by the California State Mining and Geology Board. The City of Corona does not contain mineral resources of local significance. The majority of the area designated as regionally significant for construction aggregate is east of I-15, just west of Eagle Valley, and in the Temescal Canyon area of the SOI and are currently being actively mined for mineral resources. Similarly, the majority of classified industrial minerals is located east of I-15, south of El Cerrito, and in the Temescal Canyon area of the SOI and a small pocked in the western portion of the City.

In the City of Coronal, mineral resource use must have a Mineral Resource (MR)Overlay, which requires a discretionary permit approved by the City Council. Table 5.12-3, *Impacts to Areas of Regionally Significant Mineral Resources,* show the total acreage and acreage lost to development in the City and SOI.

Table 5.12-3 Impacts to Areas of Regionally Significant Mineral Resources

| Mineral Resource Zone Classifications | City of Corona | | | Sphere of Influence | | | General Plan Planning Area | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total Acres | Acres Lost | Percent Lost | Total Acres | Acres Lost | Percent Lost | Total Acres | Acres Lost | Percent Lost |
| Regionally Significant Industrial Minerals (MRZ-2a) | 352 | 30 | 9% | 700 | 57 | 8% | 1,052 | 100 | 10% |
| Regionally Significant Construction Aggregate (MRZ-2) | 709 | 153 | 22% | 2,266 | 172 | 8% | 2,975 | 325 | 11% |

Source: CDC 2014

As shown in in this table, implementation of the General Plan Update would result in residential and non-residential development which would preclude the extraction of approximately 100 acres of industrial minerals and 325 acres of construction aggregate in the City and SOI. Most of the construction aggregate that would be precluded as a result of buildout of the General Plan in the City is west of Home Gardens and east of El Cerrito. The construction aggregate resources shown west of Home Gardens crosses developed portions of the city that have various residential and non-residential General Plan designations none of which have a Mineral Resources Overlay Zone. Development is this area has already occurred and the General Plan was already changed to accommodate the land uses that exist today. The area east of El Cerrito is the site of the two active mines in the city and designated General Industry. The zoning of the properties for both mines have a Mineral Resources Overlay Zone. Construction aggregate in the SOI that would be precluded as a result of implementation of the General Plan is in the southeastern portion of Temescal Canyon[2]. Additionally, most of the industrial minerals located south of El Cerrito that would be precluded from extraction as a result of the General Plan update has land use designations of Estate Residential (ER) and Low Density Residential (LDR). Industrial minerals in the eastern and southeastern portions of El Cerrito in the SOI and portions located to the east of I-15 in Temescal Canyon would also be precluded from development as a result of the implementation of the General Plan Update[3].

The General Plan Update includes policies to protect the availability of mineral resources, while at the same time allowing the extraction of mineral resources.

- **ER-10.1** Maintain the use of the city's Mineral Resource Overlay Zone in the City's Zoning Ordinance to ensure lands having a state classification of MRZ-2 through the Department of Conservation have the opportunity to be made available for mineral materials.

[2] The SOI land use designations that overlay the designated construction aggregate mineral resource areas include: Business Park (BP), Commercial Retail District (CR), Medium Density Residential (MDR), Conservation (OS-C), Conservation Habitat (OS-CH), Public Facilities (PF), Commercial Tourist (CT), freeways (FWY), and Very Low Density Residential (VLDR).

[3] The SOI land use designations that overlay the industrial mineral resource areas include: Commercial Retail District (CR), Medium Density Residential (MDR), Conservation (OS-C), Conservation Habitat (OS-CH), Public Facilities (PF), Commercial Tourist (CT), freeways (FWY).

- **ER-10.3** Adopt the making of certain findings required by Section 2764(b) of the Surface Mining and Reclamation Act for land known to have MRZ-2 resources but not protected for mineral materials by City Council resolution.

- **ER-10.4** Permit through the city's Surface Mine Permit process the extraction of mineral resources or exploration of mining in resource areas identified by the MR Overlay Zone consistent with the general plan land use designation.

| General Plan Designations | Compatible |
|---|---|
| General Industry | Yes |
| Open Space General | Yes |
| Agriculture | Yes |
| Utility | Yes |

- **ER-11.5** All mining operations that have a valid mining permit and reclamation plan approved by the County of Riverside or a vested mining operation per Section 2776 of the Surface Mining Reclamation Act shall be deemed valid when annexed into the City's corporate boundaries. However, any significant modifications, renewal, or extension of County-issued permits or reclamation plans shall be issued and processed by the City of Corona. Significant modifications are those that would create significant new or increased impact on the environment or adjacent land uses.

Nonetheless, as the proposed General Plan Update would result in a loss of available mineral resources in the City and SOI as a result of future development, a significant impact would occur.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the ability for mineral extraction in the City or SOI. Consequently, implementation of the City's CAP would result in less than significant impacts to mineral resources.

## 5.12.5 Existing Regulations and Standard Conditions

### State

- California Geological Survey Mineral Resources Project
- Surface Mining and Reclamation Act (California Public Resources Code Sections 2710 et seq.)

## 5.12.6 Level of Significance Before Mitigation

Without mitigation, this impact would be **potentially significant:**

- **Impact 5.12-1:** Development of the proposed project would result in a loss to areas with mineral resources.

## 5.12.7 Mitigation Measures

### Impact 5.12-1

MIN-1 Prior to project approval for proposed development of properties classified as either regionally significant construction aggregate MRZ-2 or industrial minerals MRZ-2a, a mineral resource evaluation shall be conducted to determine the significance and economic viability of mining the resource. If development of a property would preclude future extraction of a significant mineral resource, in accordance with CEQA, the City shall make the appropriate findings and adopt a Statement of Overriding Considerations prior to permitting development of the property.

MIN-2 Prior to approval of any project on lands classified as either regionally significant construction aggregate MRZ-2 or industrial mineral MRZ-2a, a report shall be prepared that analyzes the project's value in relation to the mineral values found onsite. The analysis shall consider the importance of construction aggregate mineral resource onsite to the market region as a whole, and not just the importance of the resources found within the City and SOI. The report shall be submitted to the City, such that the City has adequate information to develop a statement of reasons for permitting the proposed land use to the California Department of Conservation, State Mining and Geology Board, for subsequent review, in accordance with SMARA, Article 2, Section 2762 and 2763 for areas designated of regional significance.

## 5.12.8 Level of Significance After Mitigation

### Impact 5.12-1

Mitigation Measures MIN-1 and MIN-2 would require an evaluation of mineral resources prior to development activity. Because significant mineral resources may potentially be developed under the General Plan Update, especially in the SOI and particularly within the regionally significant MRZ-2 construction aggregate and MRZ-2a industrial mineral area designations, impacts to mineral resources would remain significant and unavoidable.

## 5.12.9 References

California Department of Conservation (CDC), Division of Mines and Geology. 1991. Mineral Land Classifications of the Temescal Valley Area, Riverside County, California: Special Report 165.

California Geological Survey. 2014. Update of Mineral Land Classifications for Portland Cement Concrete Grade Aggregate in Temescal Valley Production Area, Riverside County, Special; Report 231.

Corona, City of. 1990, August 7. Staff memorandum and environmental impact assessment for General Plan Amendment 90-7.

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# 5.13 NOISE

This section of the draft environmental impact report (DEIR) evaluates the potential for implementation of the Corona General Plan Update (proposed project) to result in noise and vibration impacts in the City of Corona and its sphere of influence (SOI). This section discusses the fundamentals of sound; examines federal, state, and local noise guidelines, policies, and standards; reviews noise levels at existing receptor locations; evaluates potential noise and vibration impacts associated with the General Plan and CAP update; and provides mitigation to reduce noise and vibration impacts at sensitive locations. Noise monitoring and modeling data is included as Appendix J to this Draft EIR.

## Glossary

The following are brief definitions of terminology used in this section:

- **Noise:** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level ($L_{eq}$).** The mean of the noise level, energy averaged over the measurement period.
- **$L_{max}$.** The maximum root-mean-square noise level during a measurement period.
- **Statistical Sound Level ($L_n$).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the $L_{50}$ level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period), which is half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The $L_{10}$ level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The $L_{90}$ is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."
- **Day-Night Sound Level ($L_{dn}$ or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m. Note: For general community/environmental noise, CNEL and $L_{dn}$ values rarely differ by

more than 1 dB. As a matter of practice, $L_{dn}$ and CNEL values are considered to be equivalent/interchangeable and are treated therefore in this assessment.

- **Peak Particle Velocity (PPV)**. The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.

- **Vibration Decibel (VdB).** Vibration levels are expressed in vibration decibels. A VdB is a unitless measure of vibration, expressed on a logarithmic scale, with respect to a defined reference vibration velocity. The standard reference velocity is 1 micro-inch per second ($1x10^{-6}$ in/sec). The level of vibration represents how much the ground is moving.

## 5.13.1 Environmental Setting

### Sound Fundamentals

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are "felt" more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by weighting frequencies in a manner approximating the sensitivity of the human ear.

Changes of 1 to 3 dBA are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernable to most people in an exterior environment whereas a 10 dBA change is perceived as a doubling (or halving) of the sound.

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

### Sound Measurement

Sound pressure is measured through the A-weighted measure to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies.

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dBA is 10 times more intense than 1 dBA, while 20 dBA is 100 times more intense, and 30 dBA is 1,000 times more intense. A sound as soft as human

breathing is about 10 times greater than 0 dBA. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single point source, sound levels decrease by approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dBA for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called $L_{eq}$), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the $L_{50}$ noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the $L_2$, $L_8$ and $L_{25}$ values represent the noise levels that are exceeded 2, 8, and 25 percent of the time, or 1, 5, and 15 minutes per hour. These "Ln" values are typically used to demonstrate compliance for stationary noise sources with a city's noise ordinance, as discussed below. Other values typically noted during a noise survey are the $L_{min}$ and $L_{max}$. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and the County require that, for planning purposes, an artificial dBA increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level ($L_{dn}$). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 p.m. to 10:00 p.m. and 10 dBA for the hours from 10:00 p.m. to 7:00 a.m. The $L_{dn}$ descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 p.m. and 10:00 p.m. Both descriptors give roughly the same 24-hour level (i.e., typically within 1 dBA of each other) with the CNEL being only slightly more restrictive (i.e., higher) and are, therefore, used interchangeably in this assessment.

## Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. Table 5.13-1 shows typical noise levels from familiar noise sources.

Table 5.13-1 Typical Noise Levels

| Common Outdoor Activities | Noise Level (dBA) | Common Indoor Activities |
|---|---|---|
| Onset of physical discomfort | 120+ | |
| | | |
| | 110 | Rock Band (near amplification system) |
| Jet Flyover at 1,000 feet | | |
| | 100 | |
| Gas Lawn Mower at three feet | | |
| | 90 | |
| Diesel Truck at 50 feet, at 50 mph | | Food Blender at 3 feet |
| | 80 | Garbage Disposal at 3 feet |
| Noisy Urban Area, Daytime | | |
| | 70 | Vacuum Cleaner at 10 feet |
| Commercial Area | | Normal speech at 3 feet |
| Heavy Traffic at 300 feet | 60 | |
| | | Large Business Office |
| Quiet Urban Daytime | 50 | Dishwasher Next Room |
| | | |
| Quiet Urban Nighttime | 40 | Theater, Large Conference Room (background) |
| Quiet Suburban Nighttime | | |
| | 30 | Library |
| Quiet Rural Nighttime | | Bedroom at Night, Concert Hall (background) |
| | 20 | |
| | | Broadcast/Recording Studio |
| | 10 | |
| | | |
| Lowest Threshold of Human Hearing | 0 | Lowest Threshold of Human Hearing |
| | | |

Source: Caltrans 2013a.

## Vibration Fundamentals

Vibration is an oscillating motion in the earth. Like noise, vibration is transmitted in waves, but in this case through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard.

Vibration can be either natural as in the form of earthquakes, volcanic eruptions, landslides, or man-made as from explosions, heavy machinery or trains. Both natural and man-made vibration may be continuous such as from operating machinery, or impulsive as from an explosion.

As with noise, vibration can be described by both its amplitude and frequency. Amplitude may be characterized in three ways including displacement, velocity, and acceleration. Particle displacement is a measure of the distance that a vibrated particle travels from its original position and for the purposes of soil displacement

is typically measured in inches or millimeters. Particle velocity is the rate of speed at which soil particles move in inches per second or millimeters per second. Particle acceleration is the rate of change in velocity with respect to time and is measured in inches per second (in/sec) or millimeters per second. Typically, particle velocity (measured in inches per second) and/or acceleration (measured in gravities) are used to describe vibration. Table 5.13-2 presents the human reaction to various levels of peak particle velocity (PPV).

Table 5.13-2 Human Reaction to Typical Vibration Levels

| Vibration Level Peak Particle Velocity (in/sec) | Human Reaction | Effect on Buildings |
|---|---|---|
| 0.006–0.019 | Threshold of perception, possibility of intrusion | Vibrations unlikely to cause damage of any type |
| 0.08 | Vibrations readily perceptible | Recommended upper level of vibration to which ruins and ancient monuments should be subjected |
| 0.10 | Level at which continuous vibration begins to annoy people | Virtually no risk of "architectural" (i.e., not structural) damage to normal buildings |
| 0.20 | Vibrations annoying to people in buildings | Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings |
| 0.4–0.6 | Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges | Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage |

Source: Caltrans 2013b.

Vibrations also vary in frequency and this affects perception. Typical construction vibrations fall in the 10 to 30 Hz range and usually occur around 15 Hz. Traffic vibrations exhibit a similar range of frequencies; however, due to their suspension systems, buses often generate frequencies around 3 Hz at high vehicle speeds. It is less common, but possible, to measure traffic frequencies above 30 Hz.

The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

#### 5.13.1.1 REGULATORY FRAMEWORK

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, and local governments have established standards and ordinances to control noise.

## Federal Regulations

### *US Environmental Protection Agency*

In addition to Federal Highway Administration (FHWA) standards, the United States Environmental Protection Agency (EPA) has identified the relationship between noise levels and human response. The EPA has determined that over a 24-hour period, a $L_{eq}$ of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at an $L_{eq}$ of 55 dBA and interior levels at or below 45 dBA. While these levels are relevant for planning and design and useful for informational purposes, they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community.

The EPA also set 55 dBA $L_{dn}$ as the basic goal for exterior residential noise intrusion. However, other federal agencies, in consideration of their own program requirements and goals, as well as difficulty of actually achieving a goal of 55 dBA $L_{dn}$, have settled on the 65 dBA $L_{dn}$ level as their standard. At 65 dBA $L_{dn}$, activity interference is kept to a minimum, and annoyance levels are still low. It is also a level that can realistically be achieved.

### *Occupational Health and Safety Administration*

The federal government regulates occupational noise exposure common in the workplace through the Occupational Health and Safety Administration (OSHA) under the EPA. Such limitations would apply to the operation of construction equipment and could also apply to any proposed industrial land uses. Noise exposure of this type is dependent on work conditions and is addressed through a facility's Health and Safety Plan, as required under OSHA, and is therefore not addressed further in this analysis.

## California Regulations

### *General Plan Guidelines*

The State of California, through its General Plan Guidelines, discusses how ambient noise should influence land use and development decisions and includes a table of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable uses at different noise levels expressed in CNEL. A conditionally acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements. The City has adopted their own noise and land use compatibility standards, shown in Table 5.13-3.

### *California Building Code*

The California Building Code (CBC), Title 24, Part 2, Volume 1, Chapter 12, Interior Environment, Section 1207.4, Allowable Interior Noise Levels, requires that interior noise levels attributable to exterior sources shall not exceed 45 dBA in any habitable room. The noise metric is evaluated as either the day-night average sound

level (Ldn) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

The California Green Building Standards Code (CALGreen), Chapter 5, Division, 5.5 has additional requirements for insulation that affect exterior-interior noise transmission for non-residential structures. Either the prescriptive or performance method may be used to show compliance. Pursuant to section 5.507.4.1, Exterior Noise Transmission, Prescriptive Method, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite sound transmission class (STC) rating of at least 50 or a composite outdoor-indoor transmission class (OITC) rating of no less than 40 with exterior windows of a minimum STC of 40 or OITC of 30 within a 65 dBA CNEL noise contour of an airport or within a 65 dBA CNEL or Ldn noise contour of a freeway, expressway, railroad, industrial source, or fixed-guideway source as determined by the noise element of the general plan. Where noise contours are not readily available, buildings exposed to a noise level of 65 dBA Leq 1-hour during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum of STC 40 (or OITC 30). Pursuant to section 5.507.4.2, Performance Method, buildings located in areas as defined above, wall and roof-ceiling assemblies and the building envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed and hourly Leq of 50 dBA in occupied areas during hours of operation.

### *Airport Noise Standards*

California Code of Regulations Title 21, Subchapter 6, Airport Noise Standards, establishes 65 dBA CNEL as the acceptable level of aircraft noise for persons living in the vicinity of airports. Noise-sensitive land uses in locations where the aircraft exterior noise level exceeds 65 dBA CNEL are generally incompatible, unless an aviation easement for aircraft noise has been acquired by the airport proprietor, or the residence is a high-rise apartment or condominium that has an interior CNEL of 45 dBA or less in all habitable rooms despite aircraft noise and an air circulation or air conditioning system, as appropriate. Assembly Bill (AB) 2776 requires any person who intends to sell or lease residential properties within an airport influence area to disclose that fact to the person buying the property.

## City of Corona Noise Standards

### *General Plan Noise Element*

The City of Corona General Plan Noise Element discusses the effects of noise exposure on the community and sets goals and policies to address noise control and mitigation in the development process in order to minimize exposure of excessive noise sources to the as many persons residing in the City of Corona as possible.

#### ***Exterior Land Use Compatibility***

The City has established a land use compatibility matrix that outlines exterior CNEL limits by land use category as shown in Table 5.13-3.

Table 5.13-3 City of Corona Noise Levels and Land Use Compatibility Guidelines

| Land Use Categories | | Community Noise Equivalent Level CNEL | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Categories | Uses | 55 | 60 | 65 | 70 | 75 | 80 | |
| Residential | Single Family, Duplex | A | A | B | B | D | D | D |
| | Multiple Family | A | A | B | B | C | D | D |
| Residential | Hotel, Motel Transient Lodging | A | A | B | C | C | D | D |
| Commercial Regional, District | Commercial Retail, Bank, Restaurant, Movie Theatre | A | A | B | B | C | C | D |
| Commercial Regional, Village District, Special | Commercial Retail, Bank, Restaurant, Movie Theatre | A | A | A | A | B | B | C |
| Commercial Office Institution | Office Building, Research and Development, Professional Offices, City Office Building | A | A | A | B | B | C | D |
| Commercial Recreation Institutional Civic Center | Amphitheatre, Concert Hall Auditorium, Meeting Hall | B | B | C | C | D | D | D |
| Commercial Recreation | Children's Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club | A | A | A | B | B | D | D |
| Commercial General, Special Industrial, Institutional | Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities | A | A | A | A | B | B | B |
| Institutional General | Hospital, Church, Library, Schools' Classroom | A | A | B | C | C | D | D |
| Open Space | Parks | A | A | A | B | C | D | D |
| Open Space | Golf Course, Cemeteries, Nature Centers Wildlife Reserves, Wildlife Reserves, Wildlife Habitat | A | A | A | A | B | C | C |
| Agriculture | | A | A | A | A | A | A | A |

| | |
|---|---|
| Zone A: Clearly Compatible | Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements. |
| Zone B: Normally Compatible | New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice. |
| Zone C: Normally Incompatible | New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design. |
| Zone D: Clearly Incompatible | New construction of development should generally not be undertaken. |

### *Interior Land Use Compatibility*

Table 5.13-4 shows acceptable interior and exterior noise limits for various land uses. The exterior noise limits in this table are based on the land use compatibility guidelines in Table 5.13-3.

Table 5.13-4 City of Corona Interior and Exterior Noise Standards

| Land Use Categories | | Energy Average CNEL | |
|---|---|---|---|
| Categories | Uses | Interior[1] | Exterior[2] |
| Residential | Single Family, Duplex, Multiple Family | 45[3] | 65 |
| | Mobile Home | NA | 65[4] |
| Commercial Industrial Institutional | Hotel, Motel, Transient Lodging | 45 | 65[5] |
| | Commercial Retail, Bank, Restaurant | 55 | NA |
| | Office Building, Research and Development, Professional Offices, City Office Building | 50 | NA |
| | Amphitheatre, Concert Hall Auditorium, Meeting Hall | 45 | NA |
| | Gymnasium (Multipurpose) | 50 | NA |
| | Sports Club | 55 | NA |
| | Manufacturing, Warehousing, Wholesale, Utilities | 65 | NA |
| | Movie Theatres | 45 | NA |
| Institutional | Hospital, Schools' classroom | 45 | 65 |
| | Church, Library | 45 | NA |
| Open Space | Parks | NA | 65 |

Notes:
1 Indoor environment excluding bathrooms, toilets, closets, corridors.
2 Outdoor environment limited to:
- Private yard of single family
- Multi-family private patio or balcony that is served by a means of exit from inside
- Mobile home park
- Hospital patio
- Park's picnic area
- School's playground
- Hotel and motel recreation area

3 Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.
4 Exterior noise level should be such that interior noise level will not exceed 45 CNEL.
5 Except those areas affected by aircraft noise.

### *City of Corona Municipal Code*

The City of Corona has set noise and vibration performance standards for noise sources in the City in the interest of public health, safety and general welfare. Chapter 9.24, *Loud and Unnecessary Noise*, defines the qualitative standards used in determining a potential violation of the municipal code. In general, a noise nuisance is based on the volume of the noise, intensity of the noise, whether the origin of the noise is natural or unnatural, whether the nature of the noise is usual or unusual, the volume and intensity of the background noise, whether the noise can be heard from a distance of 50 feet or more from the noise source, the nature and zoning of the area within which the noise emanates, the density of inhabitation of the area within which the noise emanates, the time of the day or night the noise occurs, the duration of the noise, whether the noise is recurrent, intermittent or constant, and whether the noise is produced by a commercial or noncommercial activity. All these factors affect the determination of whether a noise source is generating a noise nuisance. City of Corona Municipal Code Section 17.84.040, Noise, provides performance standards for two separate types of noise sources: transportation and stationary.

### *Stationary Noise*

Table 5.13-5 shows the stationary noise source standards for land uses in the City based on the standards identified in Section 17.84.040(C)(2), Stationary Noise Source Standards. Stationary sources would include mechanical equipment such as HVAC units, pool pumps and special event noise, for example.

**Table 5.13-5 Stationary Noise Source Standards**

| Type of Land Use | Maximum Allowable Noise Levels[1, 2, 3] | | | |
|---|---|---|---|---|
| | Exterior Noise Level | | Interior Noise Level | |
| | 7 a.m. to 10 p.m. | 10 p.m. to 7 a.m. | 7 a.m. to 10 p.m. | 10 p.m. to 7 a.m. |
| Single-, Double- and Multi- Family Residential | 55 dBA | 50 dBA | 45 dBA | 35 dBA |
| Other Sensitive Land Uses | 55 dBA | 50 dBA | 45 dBA | 35 dBA |
| Commercial Uses | 65 dBA | 60 dBA | Not applicable | Not applicable |
| Industrial, Manufacturing or Agricultural | 75 dBA | 70 dBA | Not applicable | Not applicable |

Source: City of Corona Municipal Code Section 17.84.040(C)(2), Stationary Noise Source Standards
Notes:
1 Each of the noise limits specified here shall be reduced by 5 dBA for impulse or simple tone noises; provided, however, that if the ambient noise level exceeds the resulting standards, the ambient shall be the standard.
2 If the measurement location is on the boundary between two different zones, the lower noise level standard applicable to the zone shall apply.
3 If the intruding noise is continuous and cannot be reasonably discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the source is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement location's designated land use and for the time of the day the noise level is measured. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the Code Enforcement Officer for the purpose of establishing the existing ambient noise level at the measurement location.

Per Section 17.84.040(C)(2)(d), Exterior Noise, it is unlawful for any person, entity or operation at any location within the incorporated area of the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property to exceed:

- The noise standard for a cumulative period of more than 30 minutes in any hour (equivalent to $L_{50}$);
- The noise standard plus 5 dB for a cumulative period of more than 15 minutes in any hour ($L_{25}$);
- The noise standard plus 10 dB for a cumulative period of more than five minutes in any hour ($L_8$);
- The noise standard plus 15 dB for a cumulative period of more than one minute in any hour ($L_2$); or
- The noise standard plus 20 dB for any period of time ($L_{max}$).

*Interior Noise*

Per Section 17.84.040(C)(2)(e), Interior Noise, it is unlawful for any person at any location within the incorporated area of the city to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such a person which causes the noise level when measured within any other residential dwelling unit or sensitive land use to exceed:

- The noise standard for a cumulative period of more than five minutes in any hour ($L_8$);
- The noise standard plus 5 dB for a cumulative period of more than one minute in any hour ($L_2$); or
- The noise standard plus 10 dB, or the maximum measured ambient, for any period of time ($L_{max}$).

*Mechanical Equipment*

City of Corona Municipal Code Section 17.84.040(D)(1), Mechanical Equipment in Residential Zones, requires that mechanical equipment—such as air conditioners and pool equipment—in a residential zone be setback at least ten feet from an adjoining property line, except where a five-foot high block sound wall is maintained extending a distance of two feet on each side of such equipment and situated either between such equipment and the property line or on said property line. Mechanical equipment in residential zones may be permitted closer than ten feet from an adjoining property line without a five-foot-high block sound wall when sound attenuation devices approved by the Building Official are installed. The noise level with sound attenuation devices installed shall comply with the limits and conditions specified (see Table 5.13-5).

### *Transportation Noise*

Table 5.13-6 shows the transportation noise source standards from the City of Corona Municipal Code Section 17.84.040(C)(3)(a), Roadway Noise. Under this section, a noise study is required to be prepared prior to the construction of new master planned roads, roadway improvements, rail lines and/or prior to the construction of residential or sensitive land uses adjacent to existing or master planned roads or railways. The noise study must identify the existing and future noise contours for the roadway and propose mitigation measures to reduce the noise impacts to a maximum of 65 dBA CNEL in the private outdoor living area of residences and to a maximum interior noise level of 45 dBA CNEL for residential and sensitive land uses, as shown previously in Table 5.13-4.

Table 5.13-6 Transportation Noise Source Standards

| Type of Land Use | Exterior Noise Level (Private Outdoor Living Areas) | Interior Noise Level |
|---|---|---|
| Residential (Roadway) | 65 CNEL | 45 CNEL |
| Residential (Airport) | 65 CNEL | 45 CNEL |
| Other sensitive land uses (Roadway) | 65 CNEL | 45 CNEL |
| Other sensitive land uses (Airport) | 65 CNEL | 45 CNEL |
| Hotels/Motels (Roadway) | 65 CNEL | 45 CNEL |
| Hotels/Motels (Airport) | 65 CNEL | 45 CNEL |

Source: City of Corona Municipal Code Section 17.84.040(C)(3)(a), *Roadway Noise*
Note: transportation noise sources preempted by state or federal law are exempted from the provisions of the municipal code.

*Airport Noise Compatibility*

City of Corona Municipal Code Section 17.84.040(C)(3)(b), Airport Noise, prohibits sensitive land uses, site-built homes and institutional uses in airport noise contours above 65 dBA CNEL. All subdivisions within two

miles of the Corona Municipal Airport or within the 65 dBA CNEL contour are required to show and record an avigation easement for the benefit of the airport. The avigation easement is required to provide notification to potential buyers and occupants of the presence of the easement and the potential for over flights and aircraft noise.

*Transportation Noise Compatibility*

City of Corona Municipal Code Section 17.24.210, Multiple Dwellings in Proximity to a State Freeway, requires that multiple dwellings constructed within 200 feet of a proposed or existing freeway right-of-way shall be shielded by a wall or a combination of a wall and earth berm. The composition, extent and nature of the wall or beret and wall shall be sufficient to muffle noise caused by motor vehicles traveling on the existing or proposed freeway, which wall or beret and wall shall be approved by the city's principal planning and building official. The height of the wall or beret and wall shall be sufficient to intersect a line drawn from a point ten feet above grade at any point along the lane of the proposed or existing freeway nearest to the proposed dwelling to the top of any window in the proposed dwelling.

### *Vibration*

According to Section 17.84.050, Vibration, of the Municipal Code, it shall be unlawful for any person to create, maintain or cause any ground vibration which is perceptible without instruments at any point on any affected property adjoining the property on which the vibration source is located. For the purposes of the municipal code, the perception threshold is presumed to be more than 0.05 inches per second root mean square (RMS) vertical velocity. This is equivalent to 94 VdB.

### *Construction Noise*

City of Corona Municipal Code Section 17.84.040(D)(2), Construction Noise, prohibits construction noise between the hours of 8:00 PM and 7:000 AM, Monday through Saturday and 6:00 PM to 10:00 AM on Sundays and federal holidays. Construction noise is defined by the municipal code as noise which is disturbing, excessive or offensive and constitutes a nuisance involving discomfort or annoyance to persons of normal sensitivity residing in the area, which is generated by the use of any tools, machinery or equipment used in connection with construction operations.

## 5.13.1.2 EXISTING CONDITIONS

### Sensitive Receptors

Certain land uses, such as residences, schools, and hospitals are particularly sensitive to noise and vibration. Sensitive receptors within the City include residences, senior housing, schools, places of worship, and recreational areas. These uses are regarded as sensitive because they are where citizens most frequently engage in activities which are likely to be disturbed by noise, such as reading, studying, sleeping, resting, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not particularly sensitive to noise or vibration.

## Ambient Noise Measurements

To determine a baseline noise level at different environments within the planning area, ambient noise monitoring was conducted within the project area in November of 2017. Measurements were made during weekday periods when the planning area is expected to be most active. Long-term (24-hour) measurements were conducted at four locations within the City, and short-term (15 minute) measurements were conducted at twelve locations around the City. All measurements were conducted from Wednesday through Thursday, November 29 to 30, 2017.

The primary noise sources in the City and SOI were nearby and distant traffic noise. Commercial operations, property maintenance, and urban activity noise (such as people talking) also contributed to the overall noise environment within the planning area. Meteorological conditions during the measurement periods were favorable for outdoor sound measurements and were noted to be representative of the typical conditions for the season. Generally, conditions included clear skies, daytime temperatures from 72 to 87 degrees Fahrenheit (°F), and winds between 0 to 2 miles per hour.

All sound level meters used for noise monitoring satisfy the American National Standards Institute (ANSI) Standard S1.3 for Type 1 general environmental noise measurement instrumentation.[1] The sound level meters were programmed to acquire noise levels with the "slow" time constant and using the "A" weighting filter network. The meters were field calibrated immediately prior to the first set of readings. The calibration was rechecked immediately after the conclusion of the readings and no notable meter "drift" was noted (i.e. less than a half dB deviation).

The field measurement effort includes data acquisition of both long-term and short-term data sets. For the long-term measurements, the microphone was at the end of an extension cable and was mounted to a light pole approximately 5 feet above the ground, while the meter was inside a weatherproof field case that was locked/chained to the pole for security. For the short-term samples, the sound level meter and microphone were mounted on a tripod 5 feet above the ground. All sound level meters were equipped with a windscreen during measurements. Noise measurement locations are described below and shown in Figure 5.13-1, *Ambient Noise Monitoring Locations*.

The following describes the noise monitoring locations:

- **Long-Term Location 1 (LT-1)** was in the southeastern portion of the City, within a secluded residential community just east of Temescal Canyon Road. A 24-hour noise measurement was taken, beginning at 3:11 PM on Wednesday, November 29, 2017, at which time the air temperature was 84°F with 24 percent Relative Humidity (RH), and winds were calm. The noise environment of this site was characterized by distant roadway noise, as well as distant industrial noise, presumably from the mining activities to the east.

- **Long-Term Location 2 (LT-2)** was within a residential community located in the western portion of the City. The noise monitor was located near the corner of Dominguez Ranch Road and San Pointe Road. A 24-hour noise measurement was taken, beginning at 1:36 PM on Wednesday, November 29,

[1] Long-term noise monitoring of ambient noise was performed using a Larson-Davis Model LxT Sound Level Meter, and a Larson-Davis Model 820 Sound Level Meter. Short-term noise monitoring was performed using a Larson-Davis Model LxT Sound Level Meter.

2017, at which time the air temperature was 78°F with 29 percent RH, and winds were calm. The noise environment of this site was characterized primarily by distant freeway noise from SR-91. Some local traffic also contributed to the noise environment at this measurement location.

- **Long-Term Location 3 (LT-3)** was in a residential area northeast of the junction of I-15 and SR-91. A 24-hour noise measurement was taken, beginning at 3:34 PM on Wednesday, November 29, 2017, at which time the air temperature was 82°F with 35 percent RH, and winds were calm. The noise environment of this site was characterized primarily by freeway noise from I-15 and SR-91. Local residential noise, such as property maintenance and dog barking was also noted at this measurement location.

- **Long-Term Location 4 (LT-4)** was within an industrial area near the northern boundary of the City. The monitoring location was approximately 0.5 miles southeast of the Corona Municipal Airport[2] runway. A 24-hour noise measurement was taken, beginning at 2:02 PM on Wednesday, November 29, 2017, at which time the air temperature was 82°F with 38 percent RH, and winds were calm. The noise environment of this site was characterized primarily by distant traffic noise, distant rail noise, as well as aircraft flyover noise associated with the airport.

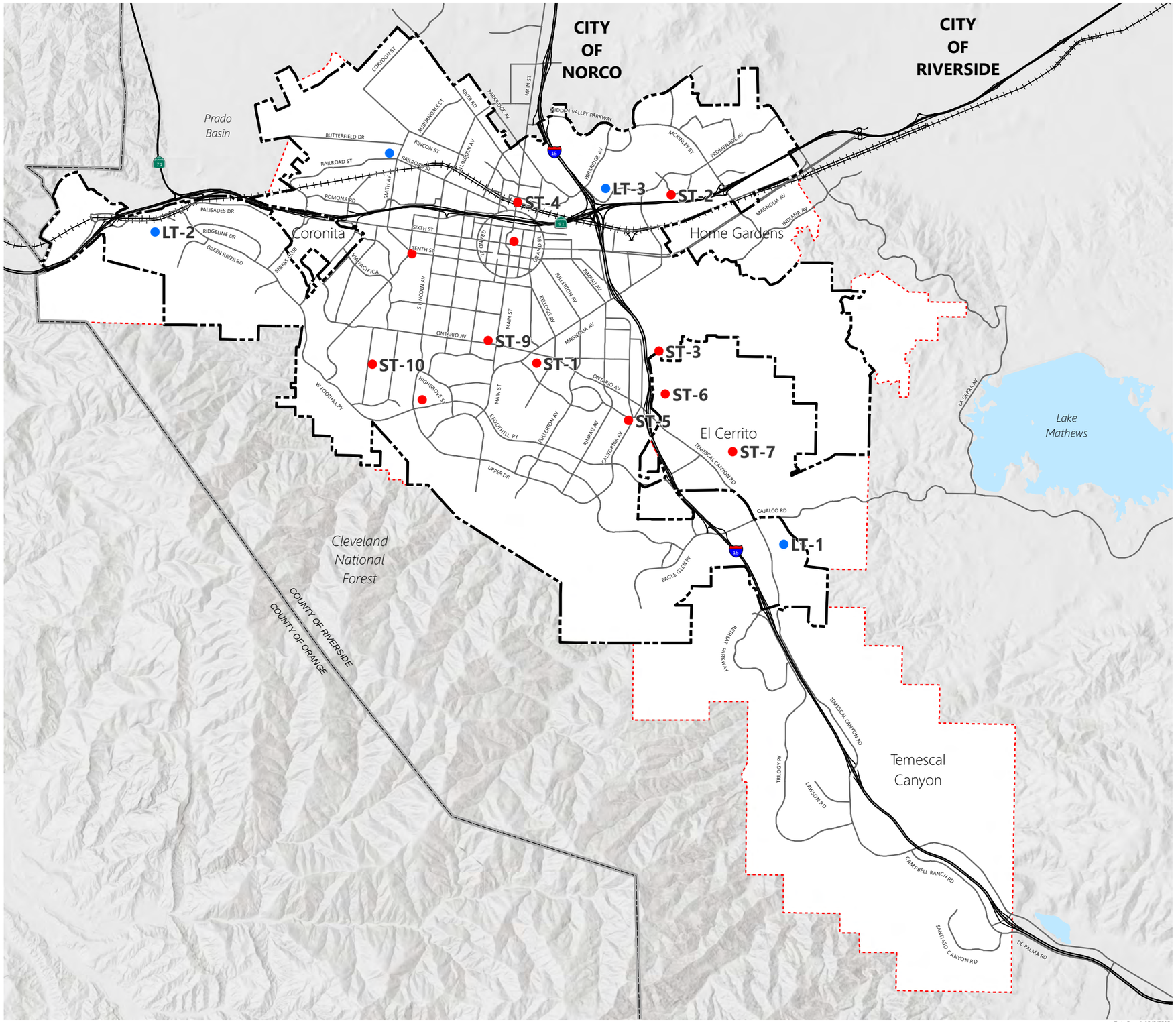
- **Short-Term Location 1 (ST-1)** was near the center of Santana Regional Park. There were no events taking place at the park during the time of the measurement, however, it is noted that Santana Park is the home of several public events that may generate temporary noise from sources such as fireworks and live music. A 15-minute noise measurement was taken, beginning at 12:08 PM on Thursday, November 30, 2017, at which time the air temperature was 79°F with 29 percent RH, and winds were calm. The noise environment around this monitoring location was controlled by distant traffic noise and distant aircraft noise.

- **Short-Term Location 2 (ST-2)** was within a residential area, in close proximity to the SR-91 freeway. A 15-minute noise measurement was taken, beginning at 4:04 PM on Wednesday, November 29, 2017, at which time the air temperature was 77°F with 41 percent RH, and winds were calm. The noise environment of this site was dominated by freeway noise from SR-91 to the south. Rail noise is also expected to affect the daily noise environment at this site.

- **Short-Term Location 3 (ST-3)** was near a low-density residential area in the eastern portion of the City. A 15-minute noise measurement was taken, beginning at 11:10 PM on Thursday, November 30, 2017, at which time the air temperature was 72°F with 26 percent RH, and winds were light at approximately 2 mph. The noise environment of this site was controlled by distant freeway noise from I-15.

- **Short-Term Location 4 (ST-4)** was near downtown, just north of Grand Boulevard. A 15-minute noise measurement was taken, beginning at 4:31 PM on Wednesday, November 29, 2017, at which time the air temperature was 76°F with 40 percent RH, and winds were calm. The noise environment around this monitoring location was dominated by local traffic noise, and other urban noise sources such as industrial activity, pedestrians, rail, and parking lots.

[2] The International Civil Aviaton Organization (ICAO) identifier for this airport is 'KAJO'.




Date Saved: 10/8/2019

Figure 5.13-1

# AMBIENT NOISE MONITORING LOCATIONS

Legend

Noise Monitoring Locations

- Long-Term (LT)
- Short-Term (ST)
- City Boundary
- Sphere of Influence Areas

*Source:*
*PlaceWorks 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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- **Short-Term Location 5 (ST-5)** was within a residential area, in close proximity to the I-15 freeway. A 15-minute noise measurement was taken, beginning at 10:37 AM on Thursday, November 30, 2017, at which time the air temperature was 74°F with 30 percent RH, and winds were calm. The noise environment of this site was dominated by freeway noise from I-15 to the west.

- **Short-Term Location 6 (ST-6)** was within a residential area, in close proximity to the I-15 freeway. A 15-minute noise measurement was taken, beginning at 11:36 AM on Thursday, November 30, 2017, at which time the air temperature was 79°F with 29 percent RH, and winds were calm. The noise environment of this site was dominated by freeway noise from I-15 to the east.

- **Short-Term Location 7 (ST-7)** was within a residential area adjacent to a large, open space area. A 15-minute noise measurement was taken, beginning at 10:14 AM on Thursday, November 30, 2017, at which time the air temperature was 71°F with 34 percent RH, and winds were calm. The noise environment of this site was exposed to distant freeway noise from I-15, but was generally quiet.

- **Short-Term Location 8 (ST-8)** was along Tenth Street, just west of Corona High School. A 15-minute noise measurement was taken, beginning at 1:58 PM on Thursday, November 30, 2017, at which time the air temperature was 84°F with 55 percent RH, and winds were calm. The noise environment around this monitoring location was primarily controlled by roadway noise from Tenth Street and Sherman Avenue.

- **Short-Term Location 9 (ST-9)** was within a residential neighborhood, within close proximity to Ontario Avenue. A 15-minute noise measurement was taken, beginning at 12:40 PM on Thursday, November 30, 2017, at which time the air temperature was 87°F with 29 percent RH, and winds were calm. The noise environment around this monitoring location was primarily controlled by distant roadway noise from Ontario Avenue and Main Street, as well as residential noise such as people talking and property maintenance.

- **Short-Term Location 10 (ST-10)** was within a residential neighborhood, within close proximity to Benjamin Franklin Elementary School. This location is relatively far away from the nearest major roadway. A 15-minute noise measurement was taken, beginning at 1:29 PM on Thursday, November 30, 2017, at which time the air temperature was 86°F with 32 percent RH, and winds were calm. The noise environment around this monitoring location was affected by distant traffic, pedestrians, as well as distant noise from children playing outdoors at the nearby elementary school.

- **Short-Term Location 11 (ST-11)** was downtown, near the city center. A 15-minute noise measurement was taken, beginning at 2:25 PM on Thursday, November 30, 2017, at which time the air temperature was 81°F with 25 percent RH, and winds were calm. The noise environment around this monitoring location was dominated by local traffic noise, and other urban noise sources such as industrial activity, pedestrians, rail, and parking lots.

- **Short-Term Location 12 (ST-12)** was within a residential neighborhood, relatively far away from the nearest major roadway. A 15-minute noise measurement was taken, beginning at 1:06 PM on Thursday, November 30, 2017, at which time the air temperature was 86°F with 32 percent RH, and winds were

calm. The noise environment around this monitoring location was affected by distant traffic, pedestrians, as well as residential noise such as people talking and property maintenance.

### *Ambient Noise Results, Long-Term Monitoring*

During the ambient noise survey, the 24-hour, energy-average ($L_{eq,\ 24\text{-}hr}$) noise levels within the monitoring ranged from 60 to 61 dBA $L_{eq(24\ hour)}$. In the CNEL metric, the long-term locations ranged from 61 to 68 dBA. The long-term noise measurement results are summarized in Table 5.13-7, *Long-Term Noise Measurements Summary*.

Table 5.13-7 Long-Term Noise Measurements Summary (dBA)

| Monitoring Location | Description | CNEL | Lowest $L_{eq,\ 1\text{-}hr}$ | $L_{eq,\ 24\text{-}hr}$ | Highest $L_{eq,\ 1\text{-}hr}$ |
|---|---|---|---|---|---|
| LT-1 | Southeastern portion of the City | 61 | 46 | 60 | 72 |
| LT-2 | Western portion of the City | 65 | 54 | 60 | 62 |
| LT-3 | Northeastern portion of the City | 61 | 56 | 61 | 70 |
| LT-4 | Northern portion of the City | 68 | 54 | 61 | 64 |

Notes: 24-hour noise measurements were conducted on November 29-30, 2017; LT-2 and LT-4 used a Larson Davis 820 sound level meter; LT-1 and LT-3 used a Larson Davis LxT sound level meter

### *Ambient Noise Results, Short-Term Monitoring*

During the ambient noise survey, the daytime $L_{eq}$ noise levels within the areas surrounding the proposed project site ranged from 45 to 65 dBA $L_{eq}$. The short-term noise measurement results are summarized in Table 5.13-8, *Short-Term Noise Measurements Summary*.

Table 5.13-8 Short-Term Noise Measurements Summary (dBA)

| Monitoring Location | Description | 15-minute Noise Levels, dBA | | |
|---|---|---|---|---|
| | | $L_{min}$ | $L_{eq}$ | $L_{max}$ |
| ST-1 | Santana Regional Park | 43 | 52 | 63 |
| ST-2 | Residential area, proximate to SR-91 | 49 | 53 | 67 |
| ST-3 | Near I-15; adjacent to residential and open space | 47 | 53 | 63 |
| ST-4 | North of downtown | 54 | 62 | 78 |
| ST-5 | Residential area, west of I-15 | 43 | 50 | 63 |
| ST-6 | Residential area, east of I-15 | 43 | 53 | 69 |
| ST-7 | Low-density residential, adjacent to open space | 35 | 45 | 57 |
| ST-8 | Near Corona High School | 52 | 65 | 75 |
| ST-9 | Residential Area near Ontario Avenue | 38 | 45 | 56 |
| ST-10 | Residential Area near Benjamin Franklin Elementary School | 34 | 45 | 59 |
| ST-11 | Center of Downtown | 52 | 60 | 72 |
| ST-12 | Residential Area near Foothill Parkway/Lincoln Avenue | 36 | 54 | 72 |

Notes: Noise sampling conducted by PlaceWorks staff November 29-30, 2017, for a minimum of 15 minutes at each site with a Larson Davis LxT sound level meter.

### *Summary of Ambient Noise Measurements*

The noise environment within the City and SOI is highly variable, depending on location. However, freeway noise from I-15 and SR-91 tend to control the noise environment at most locations. In general, noise monitoring locations that experienced less than 50 dBA $L_{eq}$ were located relatively far from these major freeway sources. The time-averaged sound level in the City was in the range of 45 to 65 dBA $L_{eq}$.

## Existing Traffic Noise

On-road vehicles represent the most prominent source of noise in the plan area. Existing traffic noise conditions were modeled using the Federal Highway Administration's (FHWA) traffic noise prediction methodology and average daily traffic (ADT) volumes, vehicle mix (auto, medium-duty truck, heavy-duty truck), time of day split (day, evening, night), speeds, and number of lanes data provided by Fehr and Peers for highway and roadway segments in the City. Appendix J lists the calculated existing noise levels on roadways in the plan area at a distance of 50 feet from the roadway centerline. Figure 5.13-2, *Existing Transportation Noise Levels*, illustrates the modeled roadways and existing noise contours for 60 dBA CNEL, 65 dBA CNEL, and 70 dBA CNEL.

## Aircraft Noise

Aircraft noise in the City is typically characterized as occasional, and the majority of flights served by the Corona Municipal Airport are for recreational purposes. Existing noise contours for the Corona Municipal Airport are shown in Figure 5.13-3, *Corona Municipal Airport Noise Contours*. As shown in Figure 5.13-3, the airport is not a substantial source of noise and does not affect most of the City since it is half a mile from the nearest residential neighborhoods. Noise exposure areas of 55 dBA CNEL and above are largely within open space and industrial use areas immediately surrounding the airport.

## Railroad Noise

Rail operations in the City are a substantial source of noise in some areas of the City. Day-night average noise levels vary throughout the community depending on the number of trains operating along a given rail line per day, the timing and duration of train passby events, and whether or not trains must sound their warning whistles near "at-grade" crossings. Day-night average noise levels commonly range from 65 to 75 dBA $L_{dn}$ at land uses adjoining a railroad right-of-way. When railroad trains approach a passenger station or "at-grade" crossing, they are required to sound their warning whistle within quarter-mile. Trains are required to sound a long signal followed by a short signal when approaching stations, curves, or other points where view may be obscured, and when approaching passenger or freight trains. When passing a standing train, the moving train is required to sound two long signals followed by a short signal followed by a long signal, the same requirement when signaling for at-grade crossings. Train warning whistles typically generate maximum noise levels of approximately 105 dBA at 100 feet. The day/night average noise level at locations immediately adjacent to "at-grade" crossings and exposed to multiple train pass-by events during a day can exceed 85 dBA $L_{dn}$/CNEL.

The Burlington Northern Santa Fe Railroad (BNSF) operates rail lines that traverse Corona carrying freight trains. This line is also shared by both the Metrolink Commuter Rail and Amtrak Passenger Rail. About 50 freight trains and 25 Metrolink and Amtrak trains use this rail corridor daily. Existing railroad noise levels were projected using the Federal Transit Administration (FTA) CREATE rail noise model and the Federal Rail Administration (FRA) Grade Crossing Horn Model, the average number of pass-bys, time of day, number of locomotives and type, number of rail cars and type, and speed. The calculated distance to the 65 dBA Ldn/CNEL contour from existing railroad noise is 650 feet in both directions along the mainline and 750 feet within a quarter-mile of crossings (due to horn sounding). The calculated distances to the 65 dBA Ldn/CNEL contours from future railroad noise are 1,050 feet in both directions from both the mainline and within a quarter-mile of crossings. Though implementation of the proposed General Plan would not cause a direct increase in rail activity. While the railroad is generally located in industrial zones, main lines also run adjacent to some residential areas

### Stationary Source Noise

Stationary sources of noises may occur from all types of land uses. Residential uses would generate noise from landscaping, maintenance activities, pool pumps, and air conditioning systems. Commercial uses would generate noise from heating, ventilation, air conditioning (HVAC) systems, loading docks and other sources. Industrial uses may generate noise from HVAC systems, loading docks, machinery, and manufacturing. Noise generated by residential or commercial uses are generally short and intermittent. Industrial uses may generate noise on a more continual basis due to the nature of its activities. Surface mining operations in eastern Corona also produce significant noise. Mining operations, which are one of the largest stationary sources of noise, are regulated pursuant to development agreement and local mining permit.

## 5.13.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

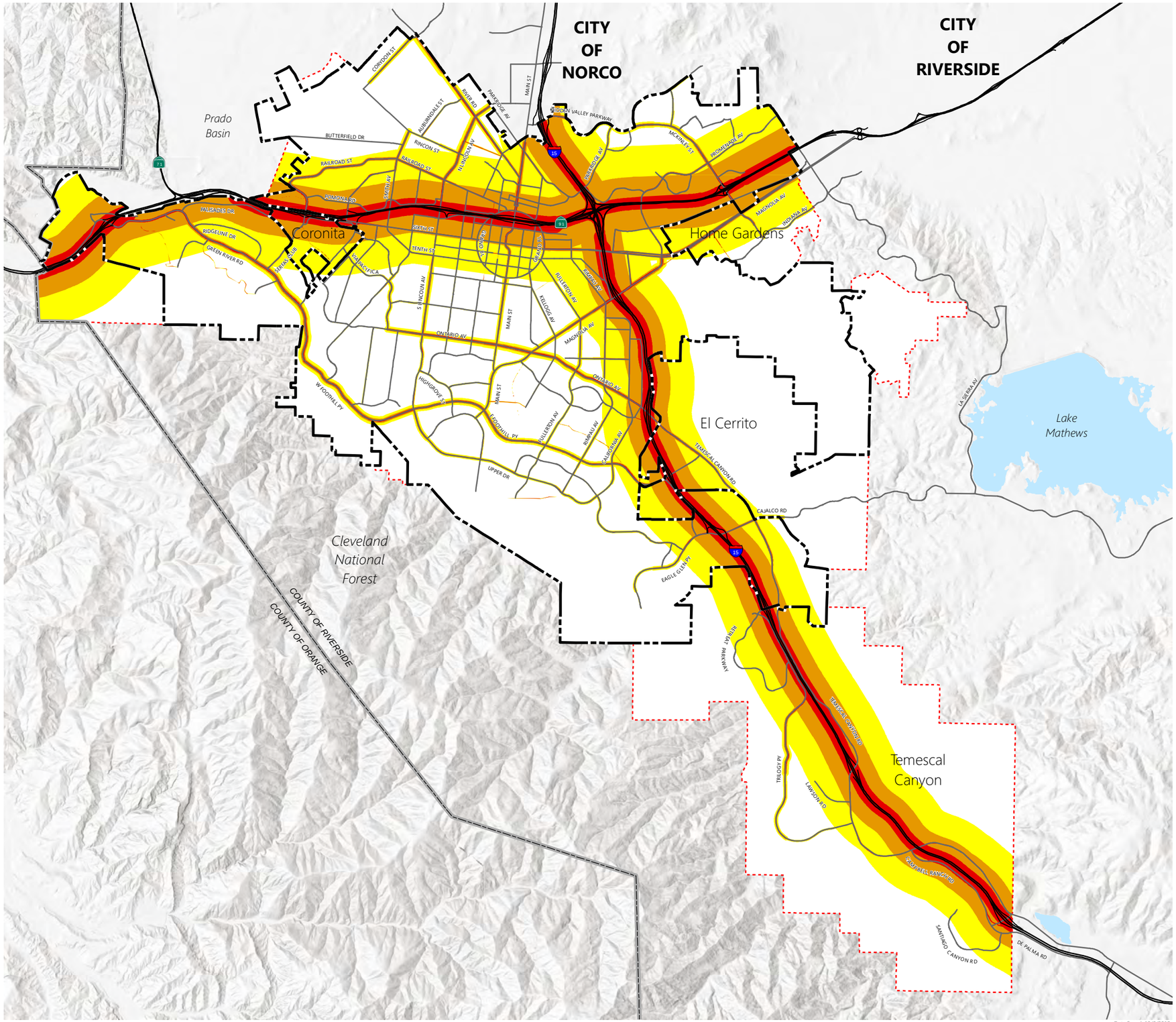
N-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

N-2 Generation of excessive groundborne vibration or groundborne noise levels.

N-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.

Figure 5.13-2

# EXISTING TRANSPORTATION NOISE LEVELS




Legend

- City Boundary
- Sphere of Influence Areas
- 70 CNEL
- 65 CNEL
- 60 CNEL

*Source:*
*Fehr & Peers, 2018*

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CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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Figure 5.13-3

# CORONA MUNICIPAL AIRPORT NOISE CONTOURS

Legend

- City Boundary
- Sphere of Influence Areas
- Corona Municipal Airport
- Runway

**Noise Compatibility Contours**

- 55 CNEL
- 60 CNEL
- 65 CNEL

*Source:*
*Riverside County Airport Land Use Compatibility Plan Policy Document October 2004*

CORONA General Plan EIR

Miles
0
0.5

PLACEWORKS

Date Saved: 10/2/2019

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#### 5.13.2.1 CITY OF CORONA THRESHOLD CRITERIA

### Construction Noise Thresholds

Construction noise impacts are addressed qualitatively based on the qualitative criteria outlined in Chapter 9.24, Loud and Unnecessary Noise, of the City's Municipal Code. In general, construction noise impacts are based on the volume of the noise, intensity of the noise, the volume and intensity of the background noise, whether the noise can be heard from a distance of 50 feet or more from the noise source, the nature and zoning of the area within which the noise emanates, the density of inhabitation of the area within which the noise emanates, the time of the day or night the noise occurs, the duration of the noise, and whether the noise is recurrent, intermittent or constant.

### Stationary Noise Thresholds

The Municipal Code provides noise standards for stationary sources that would be analyzed at the project level in Section 17.84.040(C)(2), Stationary Noise Source Standards, identified in Table 5.13-5.

### Transportation Noise Thresholds

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. For noise impacts to be considered significant, the project traffic volumes must create a noise level increase of greater than 3 dBA on the study area roadway segments and the resulting noise level must exceed the City of Corona 65 dBA CNEL exterior noise level standard identified in Tables 5.13-3, 5.13-4, and 5.13-6.

### Vibration Thresholds

#### *Architectural Damage*

The City of Corona does not have established vibration damage criteria, therefore the Federal Transit Administration (FTA) criteria for acceptable levels of ground-borne vibration for various types of buildings is used for this analysis. Structures amplify groundborne vibration and wood-frame buildings, such as typical residential structures, are more affected by ground vibration than heavier buildings. The level at which groundborne vibration is strong enough to cause architectural damage has not been determined conclusively. The most conservative estimates are reflected in the FTA standards shown in Table 5.13-9.

Table 5.13-9 Groundborne Vibration Criteria: Architectural Damage

| Building Category | | PPV (in/sec) |
|---|---|---|
| I. | Reinforced concrete, steel, or timber (no plaster) | 0.5 |
| II. | Engineered concrete and masonry (no plaster) | 0.3 |
| III. | Non-engineered timber and masonry buildings | 0.2 |
| IV. | Buildings extremely susceptible to vibration damage | 0.12 |

Source: FTA 2018.

### *Vibration Annoyance*

Section 17.84.050 of the Corona Municipal Code sets the threshold of vibration perception at no more than 0.05 inches per second root mean squared (RMS) vertical velocity (equivalent to 94 VdB[3]). Therefore, the potential for vibration annoyance is assessed using 94 VdB as a threshold in this analysis.

## 5.13.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reducing potential impacts as a result of implementation of the proposed project.

### Land Use Element

#### *Community Quality and Sense of Place*

- **LU-5.11** Require projects to implement appropriate building orientation, setbacks, buffering, privacy, and vehicle access as well as mitigate potential impacts associated with noise and lighting in order to be compatible with adjacent land uses.

#### *Residential Neighborhoods*

- **LU-8.12** Require that nonresidential uses be located and designed to maintain the quality and character of the neighborhood and prevent traffic, noise, odor, lighting, and other adverse impacts on adjoining housing units.

#### *Commercial Neighborhoods*

- **LU-11.12** Require that commercial projects abutting residential neighborhoods be designed and buildings located to prevent conflicts and ensure an appropriate interface with adjoining housing in consideration of the following principles:

[3] $Lv = 20\text{Log}_{10}(V/Vref)$
$Lv$ = velocity level, VdB
$V$ = rms velocity amplitude
$Vref$ = .000001 in/sec

- Reduction of building heights and modulation of mass and volume of the building in proximity to the adjacent housing.
- Inclusion of landscape and attractively designed walls as buffers to mitigate noise, provide privacy, and serve as a visual amenity between the commercial and residential uses.
- Design of building elevations facing residential properties to ensure privacy of adjoining housing.
- Control of the location of commercial truck access, loading, parking, and comparable functions in proximity to adjoining housing or other sensitive land uses.
- Design of on-site and building lighting to prevent spillover, glare, and adverse illumination of adjoining residential properties.

*Industrial Districts*

- **LU-12.6** In accordance with City industrial design guidelines, require that new and renovated industrial properties and structures be designed to achieve a high level of quality, distinctive architecture, and be compatible with adjoining uses in consideration of the following principles:
  - Modulation of building volumes and masses and façade articulation to avoid blank or unarticulated façades.
  - Architectural treatment of all building elevations to minimize sense of monotonous and undifferentiated walls.
  - Inclusion of courtyards, plazas, and other uses that serve as amenities for employees.
  - Signage should be attractive; consistent; well designed and proportioned; and carefully located to enhance the character of the use of the district or site.
  - Extensive landscaping of open spaces.
  - Service and utility areas, including loading docks, storage areas, mechanical systems, and trash bins, shall be screened from view and integrated into the design of a project and enclosed
  - Enclosure of storage areas with decorative screening or walls.
  - Location and design of driveways to minimize conflicts with adjoining uses and shield from public view to the extent practically feasible.
  - Mitigation of noise, odor, lighting, vibration, and other impacts.
- **LU-12.7** Regulate the development of industrial uses (consistent with local regulation and state law) that use, store, produce, or transport toxic and hazardous materials; generate unacceptable levels of air or noise pollution; or result in other adverse impacts.

- **LU-12.8** Require that heavy industrial uses incorporate landscaped setbacks, screening walls, berms, downward focused lighting fixtures, and/or other appropriate elements that mitigate visual and operational impacts on adjoining land uses.

- **LU-12.9** Require that heavy truck and vehicle access for industrial land uses be effectively placed and managed to ensure that it is safe and efficient for the present use and that it minimizes noise, odor, vibration, traffic, queuing back onto streets or existing or adjacent properties, and other safety impacts on adjoining uses.

### *Mixed-Use Districts*

- **LU-13.6** Require that mixed-use projects be designed to convey a high level of architectural and landscape quality; ensure compatibility of commercial and residential uses in consideration of the following principles:

  - Incorporate elements to avoid conflicts among functions, such as noise, lighting, and other factors.
  - Visual and physical integration of the commercial and residential uses.
  - Architectural treatment of building elevations and modulation of their massing.
  - Incorporation of separate and well-defined entries for commercial uses and residential units.
  - Design of parking areas and facilities to be architecturally consistent and integrated with commercial and residential uses.
  - Incorporation of extensive site landscape, where feasible.

### *Corona Municipal Airport*

- **LU-23.3** Work to limit the encroachment of uses that potentially pose a threat to continued airport operations, including intensification of residential, commercial, and industrial facilities within the airport safety zone and areas impacted by airport noise.

- **LU-23.4** Review proposed projects within the airport influence area of the Corona Municipal Airport for consistency with applicable airport land use compatibility plan policies adopted by the Riverside County Airport Land Use Commission and City of Corona.

- **LU-23.7** Ensure, to the extent feasible, that environmental impacts such as noise, air quality, pollution, traffic congestion, and public safety hazards associated with continued operation of Corona Municipal Airport are mitigated to the extent practicable.

## Circulation Element

### *Goods Movement*

- **CE-6.3** Develop appropriate treatments along local truck routes to minimize noise and vibration impacts on sensitive land uses that are adjacent to or impacted by the truck route.

- **CE-6.4** Ensure that new development provides adequate on-site truck loading facilities and enforce prohibition of queuing of trucks on public streets or in other areas not intended for such uses.

- **CE-6.6** Strive to minimize through truck traffic in residential neighborhoods and other areas not intended for such travel, and enforce City codes that restrict or prohibit trucks on certain streets.

## Healthy Community Element

### *Reduction in Pollution Exposure*

- **HC-2.2** Designate and maintain truck routes that are sufficient to serve the needs of industry and commerce while avoiding residential areas, schools, or other sensitive land uses so as to minimize exposure to the noise, air pollution, and vibration associated with trucks.

- **HC-2.4** Ensure that individuals, neighborhoods, and businesses clearly understand the potential for adverse pollution, noise, odor, vibration, and lighting and glare, and the effects of toxic materials or emissions when generating uses are proposed near them.

- **HC-2.5** Require the preparation of air quality, noise, and vibration technical studies to determine the impact of proposed new development on adjacent and surrounding land uses and to identify the appropriate measures required to mitigate such impacts.

- **HC-2.6** Apply and enforce performance standards with respect to fire and explosion hazards, radio frequency or electrical disturbance, noise and vibration, dust, smoke, glare, underground storage tanks, or other potential sources of exposure to pollution.

## Noise Element

### *Minimizing Transportation Noise*

- **N-1.1** Reduce noise impacts from transportation noise sources through the design and daily operation of arterial road improvements, enforcement of state motor vehicle noise standards, and other measures consistent with funding capabilities.

    - Require site design features and structural building enhancements in the development of residential and other "noise sensitive" land uses that are to be located adjacent to major roads or railroads.

    - Encourage enforcement of state motor vehicle noise standards through coordination with the California Highway Patrol and the Corona Police Department.

- Ensure that the Zoning Ordinance, Circulation Element, and Land Use Element of the General Plan fully integrate the policies adopted as part of the Noise Element.

- **N-1.2** Minimize the rise of vehicle noise from roadways through route location, sensitive roadway design, regulation of traffic volumes and speeds, and working with Caltrans in highway improvements.

- **N-1.3** Encourage Caltrans to install and maintain mitigation (e.g., noise walls) and/or landscaping elements along highways that are adjacent to existing residential subdivisions or other noise-sensitive areas in order to reduce adverse noise impacts.

- **N-1.4** Require municipal vehicles and noise-generating mechanical equipment purchased or used by the City to comply with noise performance standards consistent with the latest available noise reduction technology to the extent practicable and cost-effective.

- **N-1.5** Require new nonresidential development that attracts noise-generating vehicles (e.g., high volumes of traffic, trucking) to design and configure onsite ingress and egress points to divert traffic away from "noise sensitive" land uses, to the greatest extent practicable.

### *Noise and Land Use Planning*

- **N-2.1** Consider noise and vibration levels in land use planning decisions to prevent future noise and vibration and land use incompatibilities. Considerations may include, but not necessarily be limited to, standards that specify acceptable noise limits for various land uses, noise reduction features, acoustical design in new construction, and enforcement of the California Standards Building Code provisions for indoor and outdoor noise levels.

- **N-2.2** Require that in areas where existing or future ambient noise levels exceed an exterior noise level of 65 dBA CNEL, all development of new housing, health care facilities, schools, libraries, religious facilities, and other "noise sensitive" uses shall include site design, building enhancements, buffering, and/or mitigation to reduce noise exposure to within acceptable limits.

- **N-2.3** Require new industrial and new commercial land uses or the major expansion of such uses to demonstrate that ambient noise levels will not exceed an exterior noise level of 65 dBA CNEL on areas containing "noise sensitive" land uses as depicted in Table N-1, N-2, and N-3.

- **N-2.4** Require development in all areas where the existing or future ambient noise level exceeds 65 dBA CNEL to conduct an acoustical analysis and incorporate special design measures in their construction to reduce interior noise levels to the 45 dBA CNEL level as depicted on Table N-1, N-2, and N-3.

- **N-2.5** Encourage existing "noise sensitive uses," including schools, libraries, health care facilities, and residential uses, in areas where existing or future noise levels exceed 65 dBA CNEL to incorporate fences, walls, landscaping, and/or other noise buffers and barriers, where appropriate and feasible.

- **N-2.6** Require development that generates increased traffic and substantial increases in ambient noise levels adjacent to noise sensitive land uses to provide appropriate mitigation measures in accordance with the acceptable limits of the City Noise Ordinance.

- **N-2.7** Require construction activities that occur in close proximity to existing "noise sensitive" uses, including schools, libraries, health care facilities, and residential uses, to limit the hours and days of operation in accordance with the City Noise Ordinance.

### *Specific Land Use Standards*

- **N-3.1** Provide for the reduction in noise impacts from commercial and industrial operations as controlled and enforced through the City Noise Ordinance.

- **N-3.2** Incorporate noise reducing designs into new or remodeled commercial and industrial projects. Measures should include, but not be limited, to:

  - Sound barriers in front of HVAC units and other similar outdoor mechanical equipment.

  - Increase setbacks and buffering of parking areas and primary on-site access drives from adjacent residential areas and other sensitive uses to the maximum extent feasible with walls, fences, berms, and/or adequate landscaping.

  - Require vehicle access to commercial or industrial land uses abutting existing or planned residential areas be located at the maximum practical distance from residential areas.

  - Orient loading and unloading ramps and drop off zones away from noise sensitive land uses.

- **N-3.3** Require the design of residential and non-residential parking structures used on-site and adjacent to noise sensitive land uses incorporate noise reducing features to minimize vehicular noise from encroaching outside the structure.

- **N-3.4** Require that restaurants/bars implement operational measures to control the activities of their patrons on-site and within a reasonable distance from the establishment in order to minimize potential noise-related impacts on adjacent residential neighborhoods.

- **N-3.5** Require mixed-use structures incorporating commercial or institutional and residential uses, or industrial uses adjacent to noise and vibration sensitive uses minimize, through design and construction technology, the transfer or transmission of noise and vibration from the commercial, institutional, or industrial use to the residential land use.

- **N-3.6** Require night time land uses having amplified noise devices to be located in areas of the city that are not directly adjacent to existing and planned "noise-sensitive" land uses.

- **N-4.1** Work closely with the Burlington Northern Santa Fe Railroad operators to install and maintain noise mitigation features where operations impact existing and planned residential areas or other "noise-sensitive" areas.

- **N-4.2** Support the establishment of train operation restrictions (Quiet Zones) to reduce the noise levels of blaring horns in residential areas and adverse impacts on other "noise-sensitive" areas.

- **N-4.3** Require that development of new housing, health care facilities, schools, libraries, religious facilities, and other "noise sensitive" land uses near the railroad line include buffering and/or construction mitigation measures to reduce noise exposure to levels within acceptable limits.

- **N-4.4** Restrict development of land uses within the 65 dBA CNEL contour of the Corona Municipal Airport to industrial, agricultural, or other open space activities; require that all development in the vicinity of the Airport comply with the noise standards in the Airport Master Plan.

- **N-4.5** Work closely with the Corona Municipal Airport and operators on-site to ensure that the airport's operations do not exceed noise levels specified in the municipal code, generate adverse noise conditions in the City of Corona that are not allowed in the Airport Master Plan, nor exceed noise levels in the countywide airport land use compatibility policies.

## 5.13.4 Environmental Impacts

### 5.13.4.1 METHODOLOGY

Traffic noise levels for existing and project conditions were estimated using the FHWA traffic noise prediction model methodology. Traffic volumes vehicle mix (auto, medium-duty truck, heavy-duty truck), time of day split (day, evening, night), speeds, and number of lanes data were provided by Fehr and Peers for highway and roadway segments in the City and SOI for existing and 2040 conditions (Fehr and Peers 2019). The FHWA model predicts noise levels through a series of adjustments to a reference sound level. These adjustments account for distances from the roadway, traffic volumes, vehicle speeds, car/truck mix, number of lanes, and road width. The complete distances to the 70, 65, and 60 dBA CNEL noise contours for roadway segments in the City and SOI are included in Appendix J.

As a result of the Supreme Court decision issued December 17, 2015, regarding the assessment of the environment's impacts on projects, it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. *California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, 62 Cal. 4th 369 (No. S 213478). As a result, while the noise from existing sources is taken into account as part of the baseline, the direct effects of exterior noise from nearby noise sources relative to land use compatibility of a future project as a result of General Plan buildout is no longer a required topic for impact evaluation under CEQA. Generally, no determination of significance is required with the exception of certain school projects, project's affected by airport noise, and project's that would exacerbate existing conditions (i.e., projects that would have a significant operational impact). As required by Policy N-2.1, noise levels will be considered in land use planning decisions to prevent future noise and land use incompatibilities:

- **N-2.1** Consider noise and vibration levels in land use planning decisions to prevent future noise and vibration and land use incompatibilities. Considerations may include, but not necessarily be limited to, standards that specify acceptable noise limits for various land uses, noise reduction features, acoustical design in new construction, and enforcement of the California Standards Building Code provisions for indoor and outdoor noise levels.

At the discretion of the Community Development Department, considerations may include, but not necessarily be limited to, standards that specify acceptable noise limits for various land uses, noise reduction features, acoustical design in new construction, and enforcement of the California Standards Building Code provisions for indoor and outdoor noise levels.

### 5.13.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance and applicable thresholds are identified in brackets after the impact statement.

**Impact 5.13-1: Construction activities associated with buildout of the proposed project would result in a temporary increase in noise levels at sensitive receptors. [Threshold N-1]**

#### General Plan

As part of implementation of the proposed project, various individual land use development projects would be constructed over the duration of the General Plan buildout. Construction is performed in distinct steps, each of which has its own mix of equipment, and, consequently, its own noise characteristics. Table 5.13-10 lists typical construction equipment noise levels recommended for noise-impact assessments, based on a distance of 50 feet between the equipment and noise receptor.

Table 5.13-10 Construction Equipment Noise Emission Levels

| Construction Equipment | Typical Max Noise Level (dBA $L_{max}$)[1] | Construction Equipment | Typical Max Noise Level (dBA $L_{max}$)[1] |
|---|---|---|---|
| Air Compressor | 81 | Pile-Driver (Impact) | 101 |
| Backhoe | 80 | Pile-Driver (Sonic) | 96 |
| Ballast Equalizer | 82 | Pneumatic Tool | 85 |
| Ballast Tamper | 83 | Pump | 76 |
| Compactor | 82 | Rail Saw | 90 |
| Concrete Mixer | 85 | Rock Drill | 98 |
| Concrete Pump | 71 | Roller | 74 |
| Concrete Vibrator | 76 | Saw | 76 |
| Crane, Derrick | 88 | Scarifier | 83 |
| Crane, Mobile | 83 | Scraper | 89 |
| Dozer | 85 | Shovel | 82 |
| Generator | 81 | Spike Driver | 77 |
| Grader | 85 | Tie Cutter | 84 |
| Impact Wrench | 85 | Tie Handler | 80 |
| Jack Hammer | 88 | Tie Inserter | 85 |

Table 5.13-10 Construction Equipment Noise Emission Levels

| Construction Equipment | Typical Max Noise Level (dBA $L_{max}$)[1] | Construction Equipment | Typical Max Noise Level (dBA $L_{max}$)[1] |
|---|---|---|---|
| Loader | 85 | Truck | 88 |
| Paver | 89 | | |

Source: FTA 2018.
[1] Measured 50 feet from the source

As shown, construction equipment generates high levels of noise, with maximums ranging from 71 dBA to 101 dBA. Construction of individual developments associated with implementation of the proposed project would temporarily increase the ambient noise environment and would have the potential to affect noise-sensitive land uses in the vicinity of an individual project. According to Corona Municipal Code Section 17.84.040(D)(2), construction noise is prohibited between the hours of 8:00 PM and 7:000 AM, Monday through Saturday, and 6:00 PM to 10:00 AM on Sundays and federal holidays.

Implementation of the project would result in an increase in development intensity to accommodate populations and employment growth. Construction noise levels are highly variable and dependent upon the specific locations, site plans, and construction details of individual projects. Operation of heavy earthmoving equipment and truck haul operations during construction of individual development projects could cause significant noise impacts, particularly if construction techniques such as impact or vibratory pile driving are proposed. The time of day that construction activity is conducted would also determine the significance of each project, particularly during the more sensitive nighttime hours. However, construction would be localized and would occur intermittently for varying periods of time.

Because specific project-level information is inherently not available at this time, it is not possible nor appropriate to quantify the construction noise impacts at specific sensitive receptors. In most cases, construction of individual developments associated with implementation of the project would temporarily increase the ambient noise environment in the vicinity of each individual project, potentially affecting existing and future nearby sensitive uses. Because construction activities associated with any individual development may occur near noise-sensitive receptors and because—depending on the project type, equipment list, time of day, phasing, and overall construction durations—noise disturbances may occur for prolonged periods of time or during the more sensitive nighttime hours, construction noise impacts associated with implementation of the project are considered potentially significant.

## Climate Action Plan

The update to the City's Climate Action Plan (CAP) focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. Home energy retrofit projects may require construction activities. However, these activities (e.g., solar panel, attic insulation, window upgrades, etc.) would not require use of heavy construction equipment and would be bound to the construction hours identified in the City's Municipal Code. Additionally, the CAP would not affect the building density or

intensity allowed by the proposed project. Therefore, implementation of the Climate Action Plan would have less than significant construction noise impacts.

**Impact 5.13-2 Buildout of the proposed project would not cause a substantial increase in traffic noise levels. [Threshold N-1]**

## General Plan

### *Roadway Noise*

Buildout of the General Plan would result in an increase in traffic along local roadways proximate to existing 0.sensitive receptors. Figure 5.13-4, *Future Transportation Noise Levels*, illustrates the modeled roadways and future noise contours for 60 dBA CNEL, 65 dBA CNEL, and 70 dBA CNEL. The complete distances to the 70, 65, and 60 dBA CNEL noise contours for roadway segments in the City and SOI are included in Appendix J. Table 5.13-11 shows the estimated traffic noise increase along study roadway segments. The traffic noise increase is the difference between the projected future noise level and the existing noise level. Following industry standard practice, a significant traffic noise impact could occur if the project would result in an increase of 3 dBA CNEL or more, which is considered a barely perceptible change in outdoor environments. As shown in Table 5.13-11, no significant traffic noise increases of 3 dBA CNEL or greater are estimated along the study roadway segments from implementation of the General Plan Update.

**Table 5.13-11 Traffic Noise Increases Along Study Roadway Segments**

| Roadway Segment | Existing | | Future | | Traffic Noise Increase, dBA CNEL |
|---|---|---|---|---|---|
| | ADT | Noise Level[1] (dBA CNEL) | ADT | Noise Level[1] (dBA CNEL) | |
| McKinley St. btw Griffin Wy. & Magnolia Ave. | 52,200 | 73.8 | 52,200 | 73.8 | 0.0 |
| McKinley St. btw Promenade Ave. & Griffin Wy. | 27,702 | 71.1 | 27,800 | 71.1 | 0.0 |
| Eagle Glen Parkway/Cajalco Rd. btw Masters Dr. & I-15 | 26,300 | 71.2 | 33,800 | 72.5 | 1.3 |
| Lincoln Ave btw 6th St. & 8th St. | 24,500 | 69.8 | 25,000 | 69.9 | 0.1 |
| Hidden Valley Pkwy. btw Garland Wy. & Corona Ave. | 23,700 | 73.4 | 23,700 | 73.4 | 0.0 |
| Ontario Ave. btw California Ave. & I-15 SB Ramps | 47,000 | 76.0 | 64,100 | 77.3 | 1.3 |
| Ontario Ave. btw n I-15 SB Ramps & State St. | 47,000 | 75.7 | 63,000 | 77.1 | 1.4 |
| Rimpau Ave. btw Magnolia Ave. & Olympic Dr. | 18,300 | 68.9 | 23,000 | 69.9 | 1.0 |
| Green River Rd. btw Crestridge Dr. & Dominguez Ranch Rd. | 23,600 | 73.7 | 38,300 | 75.8 | 2.1 |

Notes: Based on FHWA's traffic noise prediction model methodology using roadway volumes, vehicle mix, time of day splits, and number of lanes provided by Fehr & Peers.
Btw: between; ADT: average daily traffic
[1] Based on the traffic noise level at 50 feet from the roadway centerline.

## Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building

density or intensity allowed by the proposed Land Use Plan; and therefore, would not result in new trip. The Climate Action Plan and would not result in traffic noise impacts.

**Impact 5.13-3: Construction activities associated with buildout of the proposed project may expose sensitive uses to strong levels of groundborne vibration. [Threshold N-2]**

## General Plan

### *Construction Vibration Impacts*

Construction activity associated with buildout of the General Plan would generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures, but can achieve the audible and perceptible ranges in buildings close to the construction site. However, groundborne vibration is almost never annoying to people who are outdoors, so it is usually evaluated in terms of indoor receivers (FTA 2018). Table 5.13-12 lists reference vibration levels for construction equipment.

**Table 5.13-12 Vibration Levels for Construction Equipment**

| Equipment | Approximate RMS Vibration Level at 25 Feet (VdB) | Approximate PPV Vibration Level at 25 Feet (in/sec) |
|---|---|---|
| Pile Driver, Impact (Upper Range) | 112 | 1.518 |
| Pile Driver, Impact (Typical) | 104 | 0.644 |
| Pile Driver, Sonic (Upper Range) | 105 | 0.734 |
| Pile Driver, Sonic (Typical) | 93 | 0.170 |
| Vibratory Roller | 94 | 0.210 |
| Large Bulldozer | 87 | 0.089 |
| Caisson Drilling | 87 | 0.089 |
| Loaded Trucks | 86 | 0.076 |
| Jackhammer | 79 | 0.035 |
| Small Bulldozer | 58 | 0.003 |

Source: FTA 2018.
Notes: RMS = root-mean-square, PPV = peak particle velocity.

As shown in Table 5.13-12, vibration generated by construction equipment has the potential to be substantial, since it has the potential to exceed the City criteria for human annoyance of 94 VdB and FTA architectural damage thresholds shown in Table 5.13-9 (e.g., 0.2 in/sec PPV for nonengineered timber and masonry buildings such as most residences). Construction details and equipment for future project-level developments under the proposed project are not known at this time, but may cause vibration impacts. Therefore, this would be a potentially significant impact.

### *Operational Vibration Impacts*

Commercial and industrial operations allowed under the General Plan Update would generate varying degrees of ground vibration, depending on the operational procedures and equipment. Such equipment-generated vibrations would spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the vibration source varies depending on soil type, ground strata, and receptor-building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels.

The City of Corona Municipal Code Section 17.84.050 prohibits any person to create, maintain or cause any ground vibration which is perceptible without instruments at any point on any affected property adjoining the property on which the vibration source is located. For the purposes of the municipal code, the perception threshold is presumed to be more than 0.05 inches per second RMS vertical velocity. This is equivalent to 94 VdB. Because new development is required to adhere to this threshold, implementation of the proposed General Plan Update would not result in operational phase vibration impacts.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. Home energy retrofit projects may require construction activities. However, these activities (e.g., solar panel, attic insulation, window upgrades, etc.) would not require use of heavy construction equipment and would not generally result in vibration levels that exceed the City's or FTA criteria. Additionally, the CAP would not affect the building density or intensity allowed by the proposed Land Use Plan. As a result, the Climate Action Plan would have less than significant vibration impacts.

**Impact 5.13-4: The proximity of the project area to an airport or airstrip would not result in exposure of future residents and/or workers to new airport-related noise. [Threshold N-3]**

### General Plan

Aircraft noise in the City is typically characterized as occasional, and the majority of flights served by the Corona Municipal Airport are for recreational purposes. Existing noise contours for the Corona Municipal Airport are shown in Figure 5.13-3. Pursuant to Section 21096 of the Public Resources Code, the lead agency must consider whether the project will result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area.

As shown in Figure 5.13-3, the airport is not a substantial source of noise because the 65 dBA noise contour does not extend past the airport boundary. Noise does not substantially affect sensitive receptors in the City because the airport is half a mile from the nearest residential neighborhood. Noise exposure areas of 55 dBA CNEL and above are largely within open space and industrial use areas immediately surrounding the airport. Policy N-4.4 would restrict development of land uses within the 65 dBA CNEL contour of the Corona

Municipal Airport to industrial, agricultural, or other open space activities, and require that all development in the vicinity of the Airport comply with the noise standards in the Airport Master Plan. Consequently, noise impacts associated with proximity to the Corona Municipal Airport are less than significant.

In addition, the following General Plan policies minimize noise impacts from proximity to the Corona Municipal Airport:

- **N-4.4** Restrict development of land uses within the 65 dBA CNEL contour of the Corona Municipal Airport to industrial, agricultural, or other open space activities; require that all development in the vicinity of the Airport comply with the noise standards in the Airport Master Plan.

- **N-4.5** Work closely with the Corona Municipal Airport and operators on-site to ensure that the airport's operations do not exceed noise levels specified in the municipal code, generate adverse noise conditions in the City of Corona that are not allowed in the Airport Master Plan, nor exceed noise levels in the countywide airport land use compatibility policies.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect the building density or intensity allowed within the area of the Corona Municipal Airport, and no impact would occur.

## 5.13.5 Existing Regulations and Standard Conditions

### State

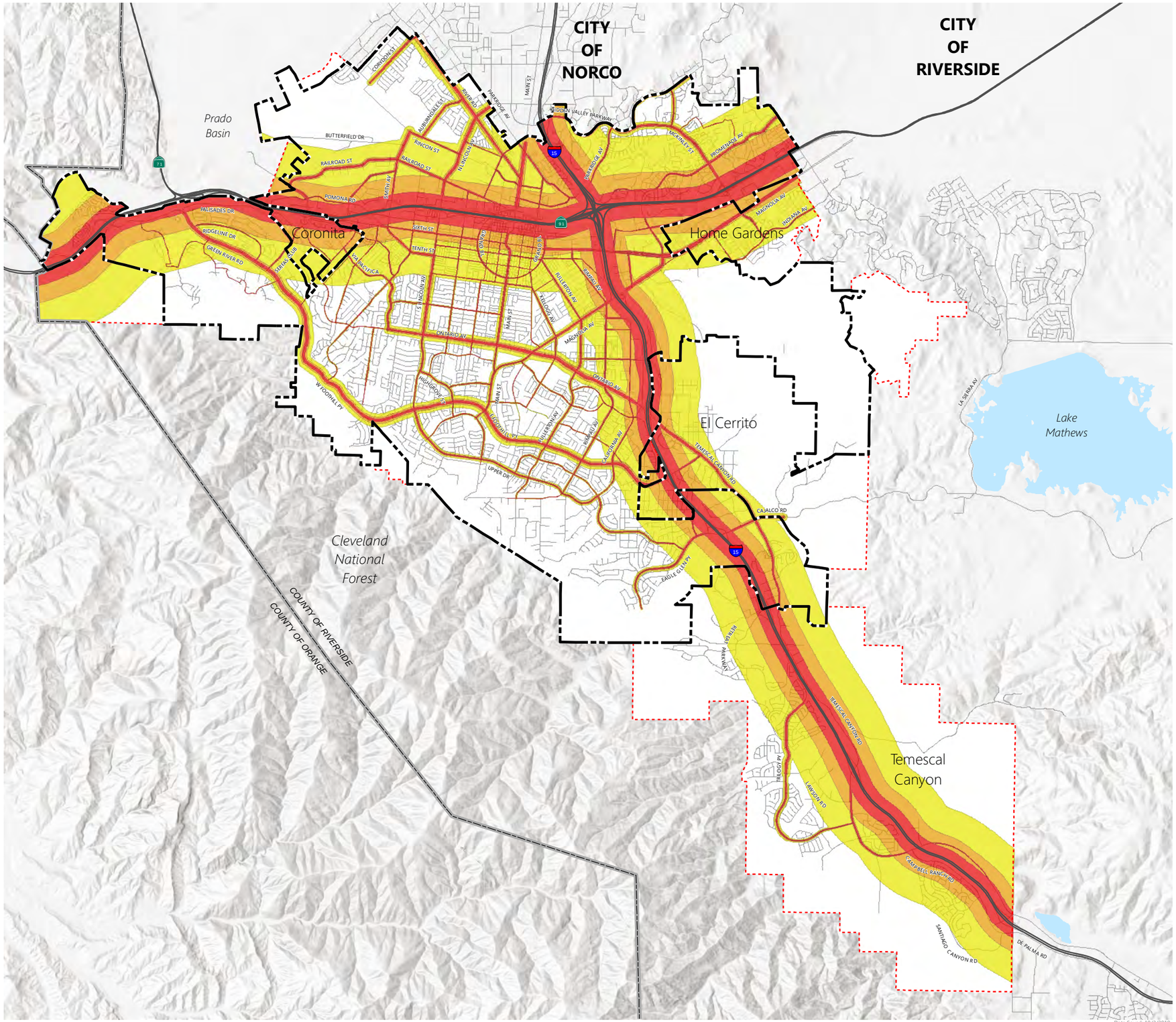
- California Building Code (CBC). Title 24, Part 2, Volume 1, Chapter 12, Interior Environment, Section 1207.4, Allowable Interior Noise Levels
- California Green Building Standards Code (CALGreen). Chapter 5, Division 5.5, Section 5.507.4.

### Local

- City of Corona Municipal Code Section 17.84.040(C)(2), Stationary Noise Source Standards.
- City of Corona Municipal Code Section 17.84.040(C)(3)(a), Roadway Noise.
- City of Corona Municipal Code Section 17.84.040(C)(3)(b), Airport Noise.
- City of Corona Municipal Code Section 17.84.040(D)(1), Mechanical Equipment in Residential Zones.
- City of Corona Municipal Code Section 17.84.040(D)(2), Construction Noise.
- City of Corona Municipal Code Section 17.24.210, Multiple Dwellings in Proximity to a State Freeway.
- City of Corona Municipal Code Section 17.84.050, Vibration.

Figure 5.13-4

# FUTURE TRANSPORTATION NOISE LEVELS



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## 5.13.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.13-2 and 5.13-4.

Without mitigation, the following impacts would be **potentially significant**:

- **Impact 5.13-1** Construction activities associated with buildout of the proposed project would result in a temporary increase in noise levels at sensitive receptors.
- **Impact 5.13-3** Construction activities associated with buildout of the proposed project may expose sensitive uses to strong levels of groundborne vibration.

## 5.13.7 Mitigation Measures

### Impact 5.13-1

N-1 Construction contractors shall implement the following measures for construction activities conducted in the City. Construction plans submitted to the City shall identify these measures on demolition, grading, and construction plans submitted to the City. The City Corona Public Works 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.

- During the active construction period, equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.
- Impact tools (e.g., jack hammers and hoe rams) shall be hydraulic- or electric-powered wherever feasible. 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.
- Stationary equipment such as generators and air compressors shall be located as far as feasible from noise-sensitive uses.
- Stockpiling shall be located as far as feasible from noise-sensitive receptors.
- Construction traffic shall be limited—to the extent feasible—to approved haul routes established by the City.
- 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 contact information 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, they shall investigate, take appropriate corrective action, and report the action to the City.

- 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.
- 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 be responsible for adjusting alarms based on the background noise level, or to utilize human spotters when feasible and in compliance with all safety requirements and laws.
- When construction noise is predicted to exceed established noise standards and when the anticipated construction duration is two years or more, contractors shall erect temporary noise barriers, where feasible.

### Impact 5.13-3

N-2 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 nonengineered 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 in/sec 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), or the City threshold of 0.05 in/sec RMS (94 VdB). If vibration levels would exceed this threshold, alternative uses such static rollers and drilling piles as opposed to pile driving shall be used.

## 5.13.8 Level of Significance After Mitigation

### Impact 5.13-1

Mitigation Measure N-1 would reduce potential noise impacts during construction to the extent feasible. However, due to the potential for proximity of construction activities to sensitive uses, the number of construction projects occurring simultaneously, and the potential longevity of construction activities, Impact 5.13-1 could result in a temporary substantial increase in noise levels above ambient conditions. Therefore, impacts would remain ***significant and unavoidable***.

### Impact 5.13-3

Mitigation Measure N-2 would reduce potential vibration impacts during construction below the pertinent thresholds. With implementation of Mitigation Measure N-2, Impact 5.13-3 would be reduced to less than significant levels.

## 5.13.9 References

California Department of Transportation (Caltrans). 2011. Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects.

———. 2013a, September. Technical Noise Supplement ("TeNS").

———. 2013b. Transportation and Construction Vibration Guidance Manual.

Federal Highway Administration (FHWA). 1978, December. Federal Highway Traffic Noise Prediction Model. United States Department of Transportation Report No. FHWA-RD77-108.

Federal Transit Administration (FTA). 2018, September. Transit Noise and Vibration Impact Assessment Manual. US Department of Transportation.

Governor's Office of Planning and Research (OPR). 2017. State of California General Plan Guidelines.

Harris, Cyril M. 1998. *Handbook of Acoustical Measurements and Noise Control.* 3rd edition. Woodbury, NY: Acoustical Society of America.

# 5.14 POPULATION AND HOUSING

This section of the Draft Environmental Impact Report (DEIR) examines the potential for socioeconomic impacts of the City of Corona General Plan Update on the City of Corona and its Sphere of Influence (SOI), including changes in population, employment, and housing. Cumulative impacts related to population and housing would be contiguous with the City and SOI boundaries.

## 5.14.1 Environmental Setting

### 5.14.1.1 REGULATORY FRAMEWORK

#### State Laws

##### *California Housing Element Law*

California planning and zoning law requires each city and county to adopt a general plan for future growth (California Government Code Section 65300). This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the state level, the Housing and Community Development Department (HCD) estimates the relative share of California's projected population growth that would occur in each county based on California Department of Finance (DOF) population projections and historical growth trends. These figures are compiled by HCD in a Regional Housing Needs Assessment (RHNA) for each region of California. Where there is a regional council of governments, the HCD provides the RHNA to the council. The council then assigns a share of the regional housing need to each of its cities and counties. The process of assigning shares gives cities and counties the opportunity to comment on the proposed allocations. The HCD oversees the process to ensure that the council of governments distributes its share of the state's projected housing need.

State law recognizes the vital role local governments play in the supply and affordability of housing. To that end, California Government Code requires that the housing element achieve legislative goals to:

- Identify adequate sites to facilitate and encourage the development, maintenance, and improvement of housing for households of all economic levels, including persons with disabilities.
- Remove, as legally feasible and appropriate, governmental constraints to the production, maintenance, and improvement of housing for persons of all incomes, including those with disabilities.
- Assist in the development of adequate housing to meet the needs of low and moderate income households.
- Conserve and improve the condition of housing and neighborhoods, including existing affordable housing. Promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status, or disability.
- Preserve for lower income households the publicly assisted multifamily housing developments in each community.

California housing element laws (California Government Code §§ 65580–65589) require that each city and county identify and analyze existing and projected housing needs within its jurisdiction and prepare goals, policies, and programs to further the development, improvement, and preservation of housing for all economic segments of the community commensurate with local housing needs. The City of Corona General Plan Housing Element was updated in 2013 for the 2013 to 2021 eight-year plan period.

### Regional Planning

#### *Southern California Association of Governments*

SCAG is a regional council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties, which encompass over 38,000 square miles. SCAG is the federally recognized metropolitan planning organization (MPO) for this region and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the southern California region's MPO, SCAG cooperates with the South Coast Air Quality Management District, the California Department of Transportation, and other agencies in preparing regional planning documents. The City of Corona is within the Western Riverside Council of Governments (WRCOG) subregion of SCAG.

##### *Regional Transportation Plan/Sustainable Community Strategy*

SCAG has developed regional plans to achieve specific regional objectives. On April 7, 2016, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS), a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals (SCAG 2016a). This long-range plan, which is a requirement of the state of California and the federal government, is updated by SCAG every four years as demographic, economic, and policy circumstances change. A component of the 2016–2040 RTP/SCS is a set of growth forecasts that estimates employment, population, and housing growth. These estimates are used by SCAG, transportation agencies, and local agencies to anticipate and plan for growth. For more information regarding SCAG and the 2016–2040 RTP/SCS, see Section 5.11, *Land Use and Planning*, of this DEIR.

## 5.14.1.2 EXISTING CONDITIONS

### Methodology

The project area's demographics are examined in the context of existing and projected populations and housing units for the Riverside County region and the City of Corona and its SOI. Information on population, housing, and employment for the project area is available from several sources, including:

- **California Department of Finance (DOF)**. The DOF prepares and administers California's annual budget. Other duties include estimating population demographics and enrollment projections.

- **Southern California Association of Governments**. Policies, programs, employment, housing, and population projections adopted by SCAG to achieve regional objectives are expressed in its 2016 RTP/SCS.

- **United States Census Bureau**. The official United States Census is described in Article I, Section 2 of the Constitution of the United States. It calls for an actual enumeration of the people every 10 years, to be used for apportionment among the states of seats in the House of Representatives. The United States Census Bureau publishes population and household data gathered in the decennial census.

- **American Community Survey**. The American Community Survey is facilitated by the U.S. Census Bureau and provides estimates of population, housing, household, economic, and transportation trends between decennial census.

## Population

The City of Corona was incorporated in 1896, and by 1940, the population had grown to 8,764. By 1970, the population had more than doubled to 27,519, and by 1980 had increased to approximately 40,000. During the beginning of the 1980s, the population increased significantly as land was converted to residential uses. From 2010 to 2017, the City's population growth slowed as vacant land gradually lessened in the community. The population baseline for the General Plan Update is from 2017. The population of the City and its SOI are 165,366 and 37,264, respectively. Table 5.14-1, *Population Trends in the City of Corona and Riverside County*, indicates the population growth in the City of Corona and Riverside County, from 2005 to 2017.

Table 5.14-1 Population Trends in the City of Corona and Riverside County

| | City of Corona | | Riverside County | |
|---|---|---|---|---|
| Year | Population | Percent Change | Population | Percent Change |
| 2005 | 162,410 | N/A | 1,911,281 | N/A |
| 2006 | 161,998 | -0.25% | 2,026,803 | 6.04% |
| 2007 | 156,394 | -3.46% | 2,073,571 | 2.31% |
| 2008 | 173,119 | 10.69% | 2,100,516 | 1.30% |
| 2009 | 151,015 | -12.77% | 2,125,440 | 1.19% |
| 2010 | 153,335 | 1.54% | 2,203,332 | 3.66% |
| 2011 | 155,884 | 1.66% | 2,239,620 | 1.65% |
| 2012 | 158,388 | 1.61% | 2,268,783 | 1.30% |
| 2013 | 159,507 | 0.71% | 2,292,507 | 1.05% |
| 2014 | 161,498 | 1.25% | 2,329,271 | 1.60% |
| 2015 | 164,242 | 1.70% | 2,361,026 | 1.36% |
| 2016 | 166,774 | 1.54% | 2,387,741 | 1.13% |
| 2017 | 167,843 | 0.64% | 2,423,266 | 1.49% |

Source: US Census Bureau 2017a ACS.

## Housing

### *Housing Trends*

As shown in Table 5.14-2, *Historical Housing Growth Trends in the City of Corona and Riverside County*, the rate of housing growth has varied over the years.

Table 5.14-2 Historical Housing Growth Trends in the City of Corona and Riverside County

| | City of Corona | | Riverside County | |
|---|---|---|---|---|
| Year | Total Housing Units | Percent Change | Total Housing Units | Percent Change |
| 2005 | 48,369 | N/A | 699,474 | N/A |
| 2006 | 49,206 | 1.73% | 732,433 | 4.71% |
| 2007 | 48,194 | -2.06% | 755,325 | 3.13% |
| 2008 | 49,464 | 2.64% | 769,126 | 1.83% |
| 2009 | 43,375 | -12.31% | 774,705 | 0.73% |
| 2010 | 47,233 | 8.89% | 801,324 | 3.44% |
| 2011 | 46,940 | -0.62% | 807,206 | 0.73% |
| 2012 | 47,648 | 1.51% | 805,050 | -0.27% |
| 2013 | 50,195 | 5.35% | 811,100 | 0.75% |
| 2014 | 51,935 | 3.47% | 820,011 | 1.10% |
| 2015 | 56,565 | 8.91% | 826,825 | 0.83% |
| 2016 | 52,386 | -7.39% | 831,404 | 0.55% |
| 2017 | 50,301 | -3.98% | 840,273 | 1.07% |

Source: US Census Bureau 2017b ACS.

### *Existing Housing Units*

The City of Corona and its SOI have traditionally been single-family residential communities. In 2018, approximately 68 percent of the City's housing stock was single-family units, and approximately 90 percent of the housing units in the SOI was single-family units. Table 5.14-3, *Housing Units in the City of Corona and SOI*, identifies the prevalence of housing types in the City of Corona and its SOI.

Table 5.14-3 Housing Units in the City of Corona and SOI

| | City of Corona 2018 | | SOI 2018 | |
|---|---|---|---|---|
| Type | Number of Units | Percent | Number of Units | Percent |
| Single Family | 32,943 | 68% | 9,820 | 90% |
| Multifamily | 14,199 | 29% | 432 | 4% |
| Mobile Homes | 1,389 | 2% | 642 | 6% |
| Other | 1 | <1% | 2 | <1% |
| Total | 48,532 | 100% | 10,896 | 100% |

Note: See Table 3-1, *Existing Land Use Summary, City of Corona and Sphere of Influence*, in Chapter 3, *Project Description*. Figures were rounded up to the nearest whole number.

### *Regional Housing Needs Assessment*

As shown in Table 5.14-4, *City of Corona 2013–2021 Regional Housing Needs Assessment*, the City of Corona's RHNA allocation for the 2013–2021 planning period is 770 units. This number was calculated by SCAG based on the City's share of the region's employment growth, migration and immigration trends, and birth rates.

Table 5.14-4 City of Corona 2014–2021 Regional Housing Needs Assessment

| Income Category (% of County AMI) | Number of Units | Percentage |
|---|---|---|
| Extremely Low Income (30% or less)[1] | 92 | 11.9% |
| Very Low (31% to 50%) | 100 | 13% |
| Low (51% to 80%) | 128 | 16.6% |
| Moderate (81% to 120%) | 142 | 18.5% |
| Above Moderate (Over 120%) | 308 | 40% |
| Total | 770 | 100% |

Source: Corona 2013.
Note: AMI = Area Median Income
[1] The City has a RHNA allocation of 192 very low income units (inclusive of extremely low income units). Pursuant to State law (AB 2634), the City must project the number of extremely low income housing needs based on Census income distribution or assume 50% of the very low income units as extremely low. According to the CHAS data developed by HUD, 13.7% of City households earned less than 50% of the AMI. Among these households, 48.2% earned incomes below 30% (extremely low). Therefore, the City's RHNA allocation of 192 very low income units may be split into 92 extremely low and 100 very low income units. However, for purposes of identifying adequate sites for the RHNA allocation, State law does not mandate separate accounting for the extremely low income category.

## Employment

### *Employment Trends*

According to the California Employment Development Department, the growth rate of employment in the City of Corona and Riverside County increased throughout 2010 to 2017. The City of Corona and Riverside County employment and annual employment change percentages are shown in Table 5.14-5, *City of Corona and Riverside County Employment Trends*. As noted in Table 3-1 of this DEIR, in 2018, the total number of jobs in the City was 70,972, which is lower than that identified by the California Employment Development Department for this EIR.

Table 5.14-5 City of Corona and Riverside County Employment Trends

| | City of Corona | | Riverside County | |
|---|---|---|---|---|
| Year | Employment (Persons) | Percent Change | Employment (Persons) | Percent Change |
| 2010 | 65,883 | N/A | 841,300 | N/A |
| 2011 | 66,275 | 0.59% | 849,600 | 0.99% |
| 2012 | 68,408 | 3.22% | 872,300 | 2.67% |
| 2013 | 70,350 | 2.84% | 897,700 | 2.91% |
| 2014 | 72,650 | 3.27% | 930,400 | 3.64% |
| 2015 | 75,692 | 4.19% | 966,300 | 3.86% |
| 2016 | 77,717 | 2.68% | 988,200 | 2.27% |
| 2017 | 80,050 | 3.00% | 1,016,200 | 2.83% |

Source: EDD 2018.

### *Existing Employment*

Table 5.14-6, *City of Corona; Industry by Occupation (2007–2017),* shows the City's total workforce by occupation and industry between 2007 and 2017. According to the estimates calculated by the US Census, the City of Corona had an employed civilian labor force (16 years and older) of 76,096 between 2007 and 2017. The three largest occupational categories during the 2007–2017 period were educational services, and health care and social assistance; manufacturing; and retail trade. During the 2007–2017 period, the City's workforce made up 8.2 percent of Riverside County's employed civilian workforce of 922,749 (US Census Bureau 2017c).

Table 5.14-6 City of Corona; Industry by Occupation (2007–2017)

| Industry/Occupation | Number | Percent |
|---|---|---|
| Agriculture, forestry, fishing and hunting, and mining | 306 | 0.4% |
| Construction | 5,849 | 7.7% |
| Manufacturing | 10,231 | 13.4% |
| Wholesale Trade | 3,066 | 4% |
| Retail trade | 9,532 | 12.5% |
| Transportation and warehousing, and utilities | 4,426 | 5.8% |
| Information | 1,399 | 1.8% |
| Finance and insurance, and real estate and rental and leasing | 5,474 | 7.2% |
| Professional, scientific, and management, and administrative and waste management services | 7,536 | 9.9% |
| Educational services, and health care and social assistance | 14,256 | 18.7% |
| Arts, entertainment, and recreation, and accommodation and food services | 6,315 | 8.3% |
| Other services, except public administration | 3,589 | 4.7% |
| Public administration | 4,087 | 5.4% |
| Total | 76,096 | 100% |

Source: US Census Bureau 2017c ACS.
Note: Figures were rounded up to the nearest whole number/one decimal place. Employment figures count civilian employees 16 years and older.

## Growth Projections

### *Southern California Association of Governments*

SCAG undertakes comprehensive regional planning with an emphasis on transportation, producing an RTP/SCS. The 2016–2040 RTP/SCS provides projections of population, households, and total employment for both the City of Corona and Riverside County. Based on their share of California's and the region's employment growth, migration and immigration trends, and birth rates, SCAG projects the population, housing, and employment will grow at an increasing rate in the City of Corona and Riverside County. These projections are summarized in Table 5.14-7, *SCAG Growth Projections for the City of Corona and Riverside County*. As identified in Table 3-1, the City's existing population and employment has already exceeded SCAG's 2020 population and employment forecast.

Table 5.14-7 SCAG Growth Projections for the City of Corona and Riverside County

| | City of Corona | | | Riverside County | | |
|---|---|---|---|---|---|---|
| | 2020 | 2035 | 2040 | 2020 | 2035 | 2040 |
| Population | 166,100 | 170,500 | 172,300 | 2,479,800 | 3,055,100 | 3,183,700 |
| Households | 49,500 | 51,300 | 52,000 | 802,400 | 1,009,000 | 1,054,300 |
| Housing Units[1] | 47,025 | 48,735 | 49,400 | 762,280 | 958,550 | 1,001,585 |
| Employment | 74,300 | 82,300 | 88,400 | 848,700 | 1,111,800 | 1,174,300 |
| Jobs-Housing Ratio | 1.58 | 1.69 | 1.79 | 1.11 | 1.16 | 1.17 |

Source: SCAG 2016b.
[1] Housing units in SCAG projections are estimated based on number of households and a vacancy rate of 5 percent.

### Job-Housing Ratio

The job-housing ratio is a general measure of the total number of jobs and number of housing in a defined geographic area, without regard to economic constraints or individual preferences. The balance of jobs and housing in an area, in terms of the total number of jobs and housing units in addition to the type of jobs versus the price of housing, has implications for mobility, air quality, and the distribution of tax revenues. The job-housing ratio is one indicator of a project's effect on growth and quality of life in the project area. SCAG applies the job-housing ratio at the regional and subregional levels in order to analyze the fit between jobs, housing, and infrastructure. A main focus of SCAG's regional planning efforts has been to improve this balance, however, job-housing goals and ratios are only advisory. There is no ideal job-housing ratio adopted in state, regional, or city policies. The American Planning Association (APA) is an authoritative resource for community planning best practices, including recommendations for assessing job-housing ratios. Although APA recognizes that an ideal job-housing ratio will vary across jurisdictions, its recommended target for an appropriate job-housing ratio is 1.5, with a recommended range of 1.3 to 1.7 (Weitz 2003).

As identified in Table 3-1, *Existing Land Use Summary, City of Corona and Sphere of Influence*, the City currently has 48,532 housing units and 70,972 employees, and thus has a current jobs-housing ratio of 1.46, which is considered balanced. Based on SCAG's growth projections for year 2020, shown in Table 5.14-7, SCAG is forecasting that the City will have a jobs-housing ratio of 1.58 making the city balanced. Based on SCAG's growth projections for 2040, shown in Table 5.14-7, the City of Corona is projected to be a jobs-rich community, with the number of jobs increasing at a faster rate than the number of housing units provided by 2040 resulting in a jobs housing ratio of 1.17.

## 5.14.2 Thresholds of Significance

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

P-1 Induce substantial 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).

P-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

## 5.14.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may reduce potential population and housing impacts as a result of implementation of the proposed project.

### Housing Element

#### *Housing Production*

- **H-1.1** Continue to support public and private sector nonprofit and for-profit organizations in their efforts to construct, acquire, and improve housing to provide access to affordable housing to lower and moderate-income households.

- **H-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

- **H-1.3** Provide sites for residential development so that scarcity of land does not unduly increase the cost or decrease the availability of housing for all segments of the community.

- **H-1.4** Support the development of sustainable projects that reduce demand for water and energy resources, reduce commute times and operational costs, and provide for transit.

- **H-1.5** Create or expand zoning designations and commensurate development standards to encourage flexibility in permitted land use.

#### *Special Needs Housing*

- **H-2.1** Encourage the development of rental units with three or more bedrooms to provide affordable housing for large families.

- **H-2.2** Work with nonprofit agencies and private sector developers to encourage development of senior housing.

- **H-2.3** Encourage the production of assisted living facilities (single story houses and apartments) to facilitate access for the disabled and the elderly.

- **H-2.4** Provide emergency shelter with transitional support for city residents, including disadvantaged groups.

- **H-2.5** Encourage the upgrade and conversion of older motels to single-room-occupancy housing.

## Economic Development Element

### *Economic Base*

- **ED-1.1** Encourage a variety of industries to locate in Corona, including commercial/professional office uses, specialized medical services, manufacturing, and "clean," high technology industries that provide high-skill/high-wage job opportunities.

- **ED-1.2** Encourage the expansion of existing businesses in Corona if possible and extend efforts at business retention.

- **ED-1.3** Utilize Specific Plans to define flexible growth areas that allow for the transition of heavy industrial to research and development to mixed-use and office uses, while allowing some viable heavy industrial areas to remain industrial.

- **ED-1.4** Encourage the growth of manufacturing companies and allied supporting businesses in Corona by providing education and resources to support their efforts to export products globally.

- **ED-1.5** Facilitate the retention and expansion of existing jobs-generating industries within existing and planned industrial areas to allow such industries to remain in Corona.

- **ED-1.6** Periodically monitor the market for retail commercial and office development, assessing the adequacy of existing sites to accommodate and capability of existing buildings to be adaptively re-used for community-desired commercial uses and adjust applicable codes and ordinances, as necessary.

- **ED-1.7** Recruit the development of new industries and businesses that build upon Corona's existing diversifying industrial base, transportation infrastructure, increasing demand for professional and medical services, and its proximity to key regional business centers.

- **ED-1.8** Discourage the development of industrial uses that are land extensive, generate few job opportunities, contribute little revenue for the City, and foreclose the opportunity to maximize economic opportunities remaining on limited vacant and underutilized land.

### *Labor Force*

- **ED-2.1** Promote development of a highly skilled labor force within high-wage emerging industries such as research and development, high technology manufacturing and office-oriented occupations.

- **ED-2.2** Promote professional development programs and vocational training to enhance the quality of the area's labor force, and assist them in obtaining new employment opportunities.

- **ED-2.3** Encourage growth of the specialty medical services industry which would allow for new employment opportunities and encourage the placement of skilled students within Corona. Increased medical specialties would also eliminate some traffic exiting daily to other counties for these services.

- **ED-2.4** Continue to build a sustainable Labor Force by building Partnerships with local education partners like the Corona-Norco Unified School District, Norco College, and Riverside Community College.

- **ED-2.5** Target the recruitment of businesses that provide high-paying jobs commensurate with the skills of Corona's residents.

## 5.14.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.14-1: The proposed project would directly result in population growth in the City of Corona and its SOI. [Threshold P-1]**

One of the purposes of a general plan is to adequately plan for and accommodate future growth. As shown in Table 3-4 in Chapter 3, *Project Description*, implementation of the proposed project would result in an increase of 11,511 housing units, 39,298 residents, 26,478,352 square feet of building space, and 31,156 jobs over approximately 20 years in the City of Corona and its SOI.

### General Plan

#### *Housing and Population Growth*

Table 5.14-8, *Proposed Housing Unit Increase in the City of Corona and SOI,* shows the total number of housing units, by type, within the City of Corona and its SOI.

Table 5.14-8 Proposed Housing Unit Increase in the City of Corona and SOI

| | City of Corona | | SOI | | Total | |
|---|---|---|---|---|---|---|
| Type | Number of Units | Percent | Number of Units | Percent | Number of Units | Percent |
| Single Family | 3,296 | 60% | 5,096 | 85% | 8,392 | 73% |
| Multifamily | 2,190 | 40% | 846 | 14% | 3,036 | 26% |
| Other | 8 | <1% | 75 | 1% | 83 | 1% |
| Total | 5,494 | 100% | 6,017 | 100% | 11,511 | 100% |

Source: See Table 3-1, *Existing Land Use Summary, City of Corona and Sphere of Influence*, and Table 3-4, *Proposed Land Use Summary*, in Chapter 3, *Project Description*.

As shown in Table 5.14-8, the General Plan Update would result in an increase of 5,494 residential units in the City and 6,017 units in the SOI, for a total increase of 11,511 residential units in the City and SOI. The increase in units would result in a population increase of 18,720 residents in the City and 20,578 residents in the SOI, for a total increase of 39,298 people in the City and SOI. At buildout there would be 54,026 units and 184,086 people in the City and 16,913 units and 57,842 people in the SOI, for a total of 70,939 units and 241,928 people in the City and SOI. The forecast population (184,086 persons) and housing units (54,026 housing units) at General Plan buildout would exceed the SCAG growth projections (172,300 persons and 49,400 housing units, see Table 5.14-7) by 6.8 percent and 9.4 percent, respectively, for the City of Corona.

It is important to note the differences between project buildout and SCAG projections. SCAG projections are utilized in this analysis for general comparison purposes. Buildout of the City is not linked to a development timeline and is based on a reasonable worst-case buildout of the parcels in the City. In addition, the proposed project provides policy level guidance and does not contain specific project proposals. On the other hand, SCAG projections are based on annual increments in order to develop regional growth projections for land use and transportation planning over a 20-year horizon to 2040. A comparison of the General Plan buildout to SCAG's population, housing, and employment projections assist in providing context for comparison. More importantly, the state of California has a shortage of housing. In 2019, Governor Newsom signed several bills aimed to address the need for more housing, including the Housing Crisis Act of 2019 (Senate Bill 330). The proposed project addresses the need for additional housing to accommodate population growth in the City. The Housing Element of the General Plan Update includes several policies to support a variety of housing types and densities to accommodate residents in the City. Thus, although the increases to population and housing units are greater than SCAG's regional forecasts for 2040, impacts would be less than significant with the incorporation of the Housing Element policies which include aiming to provide housing to meet the community's demand.

### *Employment Growth*

The proposed project would also allow for 82,191,657 square feet of additional nonresidential development in the City and SOI. The development would consist of job-generating land uses, such as commercial, office, industrial, and institutional uses. These uses are estimated to generate a total of 106,474 jobs (84,395 City; 22,079 SOI), approximately 31,156 more jobs compared to existing conditions. This is considered a substantial increase in employment and an increase that would indirectly induce population growth. However, the forecast for employment (84,395 jobs) in the City of Corona at General Plan buildout would not exceed the SCAG growth projections (88,400 jobs); the number of jobs would be 4.5 percent less than the SCAG growth projection estimates.

### *Jobs-Housing Balance*

As stated above, the General Plan would allow for up to 84,395 jobs and 54,026 residential units in the City. This would result in a job-housing ratio of 1.56. As shown in Table 5.14-9, *Jobs-Housing Balance at General Plan Buildout*, the City's job-housing ratio would increase from existing conditions but would continue to be within the target ratio of 1.3 to 1.7 jobs for every housing unit. The SOI's jobs-housing ratio would improve from existing conditions, 0.40, to post-2040 buildout, 1.31. The General Plan Update would introduce more job-generating land uses than what is currently available. However, the City's housing growth is anticipated to grow at a similar rate in order to retain its current jobs-housing balance. In general, the land uses identified in the General Plan provide opportunities for residents in the City of Corona and its SOI to both live and work in the City and SOI rather than commuting to other areas. The Economic Development Element identifies several policies aimed at providing a work force that accommodates high-paying jobs for Corona residents. Therefore, while the buildout of the proposed project would directly and indirectly induce population growth, the jobs-housing ratio in the City and SOI would continue to be balanced.

Table 5.14-9 Jobs-Housing Balance at General Plan Buildout

| | Existing 2018 | | | General Plan Buildout 2040 | | |
|---|---|---|---|---|---|---|
| | Employment | Housing Units | Jobs-Housing Ratio | Employment | Housing Units | Jobs-Housing Ratio |
| City | 70,972 | 48,532 | 1.46 | 84,395 | 54,026 | 1.56 |
| SOI | 4,346 | 10,896 | 0.40 | 22,079 | 16,913 | 1.31 |
| Total | 75,318 | 59,428 | 1.27 | 106,474 | 70,939 | 1.50 |

Source: See Table 3-1, *Existing Land Use Summary*, City of Corona and Sphere of Influence, and Table 3-4, *Proposed Land Use Summary*, in Chapter 3, *Project Description*.

### *Conclusion*

Implementation of the General Plan Update would directly induce population and employment growth in the area but would improve the jobs-housing balance in the SOI and would maintain the jobs-housing balance in the City, for an overall balanced jobs-housing ratio in the City and SOI. Furthermore, the purpose of general plan updates is to accommodate increased growth in a responsible manner. The General Plan Update accommodates future growth in the City by providing for infrastructure and public services to accommodate the projected growth (see Section 5.10, *Hydrology and Water Quality*, Section 5.15, *Public Services*, Section 5.17, *Transportation,* and Section 5.19, *Utilities and Service Systems*). Proposed policies under the General Plan Update's Community Development Element also ensure that the City provides adequate housing choices for various income levels. For example, Policies H-1.1 and H-1.2, of the Housing Element, call for the improvement of housing to provide access to affordable housing to lower and moderate-income households, and the promotion of specific plans that provide a variety of housing types and densities. Therefore, implementation of the proposed project would result in a less than significant impact relating to population growth.

### Climate Action Plan

The update to the City's Climate Action Plan (CAP)focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The goals of the CAP include increase energy efficiency in existing and new residential and commercial units. The CAP would meet these goals through the implementation of Measures 1.1 through 4.1 (see Table 3-7, *City of Corona Climate Action Plan Reduction Measures*, in Chapter 3 of this DEIR). The CAP would not affect population or the number of housing units in the City or SOI. Consequently, implementation of the City's Climate Action Plan would result in less than significant population and housing impacts.

**Impact 5.14-2: Implementation of the General Plan Update would not result in displacing people and/or housing. [Threshold P-2]**

### General Plan

The City of Corona and its SOI are developed with a variety of land uses, including residential, commercial, industrial, and open space. The proposed General Plan Update would allow existing uses to continue and would

not change land use designations, density, and intensity levels beyond that which is currently in the 2004 General Plan.

Compliance with the Housing Element would facilitate the development of a variety of housing types by providing a supply of land that is adequate to accommodate the RHNA and maintain an inventory of housing opportunity sites. As part of the Housing Element, the City of Corona prepared a land inventory to show how the City could meet the requirements for the regional housing needs allocation at a variety of affordability levels based on the permitted density of development (e.g., apartments, townhomes, single-family homes, mobile homes).

According to RHNA, the City's share of regional future housing needs is 770 new units between January 1, 2014, and October 31, 2021 (Corona 2013). Under existing land use policies and approved plans, a total of 2,578 residential units can be accommodated on underutilized and vacant sites; of these units, 2,108 units qualify as feasible for the development of very low and low income units (Corona 2013). The sites inventory assumed 70 percent of the maximum allowable density in order to provide conservative assumptions (Corona 2013).

The City and SOI have approximately 59,428 housing units; the proposed General Plan Update would increase the number of housing units in the City and SOI by 11,511, and the total number of housing units in the City and SOI at General Plan Update buildout would be 70,939. Because land use designations, density, or intensity levels would be the same as in the current 2004 General Plan, no existing uses or populations would be forced to move or be relocated as a result of project implementation; buildout of the 2004 General Plan and the proposed General Plan Update are the same. In addition, the General Plan Update would accommodate 11,511 new units compared to existing conditions. Therefore, impacts to the displacement of people and/or housing would be less than significant, as a result of the proposed project implementation.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not displace people or housing. The CAP focuses on increasing energy efficiency in existing and new residential and commercial units. Consequently, implementation of the CAP would result in less than significant impacts to population and housing.

## 5.14.5 Existing Regulations and Standard Conditions

### State Law

- California Government Code Sections 65583, 65589.5, and 65589.7

### Regional Law

- SCAG 2016–2040 RTP/SCS

## 5.14.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.14-1 and 5.14-2.

## 5.14.7 Mitigation Measures

No mitigation is required.

## 5.14.8 Level of Significance After Mitigation

Impacts would be less than significant.

## 5.14.9 References

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# 5.15 PUBLIC SERVICES

This section of the DEIR addresses impacts of the Corona General Plan Update to public services, specifically, fire protection and emergency services, police protection, school services, and library services. Park services are addressed in Section 5.16, *Recreation*. Public and private utilities and services, including water, wastewater, and solid waste services and systems, are addressed in Section 5.19, *Utilities and Service Systems*. The analysis in this section is based in part on:

- *City of Corona General Plan Update Technical Background Report*, 2019.

A complete copy of this report is included as Appendix N to this DEIR.

## 5.15.1 Fire Protection and Emergency Services

### 5.15.1.1 ENVIRONMENTAL SETTING

#### Regulatory Framework

##### *International*

###### *International Fire Code*

The International Fire Code (IFC) is a model code for regulating minimum fire-safety requirements for new and existing buildings, facilities, storage, and processes. The IFC includes general and specialized technical fire- and life-safety regulations, with topics addressing fire-department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, use and storage of hazardous materials, protection of emergency responders, industrial processes, and various other topics. The IFC is issued by the International Code Council, which is an international organization of building officials.

##### *State*

###### *California Fire Code*

The California Fire Code (CFC; California Code of Regulations, Title 24, Part 9) is based on the 2015 IFC and includes amendments from the State of California fully integrated into the code. The California Fire Code contains fire safety-related building standards that are referenced in other parts of Title 24 of the California Code of Regulations. The CFC is updated once every three years. The 2019 CFC will go into effect on January 1, 2020.

###### *California Health and Safety Code*

Sections 13000 et seq. of the California Health and Safety Code include fire regulations for building standards (also in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

## Regional

### *CAL FIRE, County of Riverside Unit Strategic Plan*

The California Strategic Plan is implemented through individual "unit plans" that are prepared for different regions of the state. CAL FIRE has adopted a Riverside Unit Fire Plan that covers Riverside County which sets forth the agency's priorities for prevention, protection, and suppression of wildfires. The overall goal of the Riverside County Unit Fire Plan is to reduce total costs and losses from wildland fire in the unit by protecting assets at risk through focused pre-fire management prescriptions increasing initial attack success.

### *Riverside County Local Agency Formation Commission*

Municipal Service reviews were added to the Local Agency Formation Commission's (LAFCO) mandate with the passage of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. A service review is a comprehensive study designed to better inform LAFCO, local agencies, and the community about the provision of municipal services. Service reviews attempt to capture and analyze information about the governance structures and efficiencies of service providers and to identify opportunities for greater coordination and cooperation between providers. The service review is a prerequisite to a Sphere of Influence update and may also lead a LAFCO to take other actions under its authority.

## Local

### *Corona Standards of Coverage Study and Fire Strategic Plan*

The Corona Fire Department sets its vision, mission, business operations, and guiding principles by means of a strategic plan so that the members of the organization can envision its future and develop the necessary procedures and operations to achieve that future. The strategic plan assists the department in preparing annual fiscal year budgets, master plans, and other required, related activities. Although the planning period is eight years, the plan is assessed annually to update service levels, performance, and other needed functions that may change during the course of a year.

### *Corona Local Hazard Mitigation Plan*

The City of Corona has prepared a local hazard mitigation plan (LHMP) to identify the City's hazards, review and assess past disasters, estimate the probability of future events, and set goals to reduce or eliminate long-term risks to people and property from natural and human-made hazards. Of the 23 hazards evaluated, earthquakes were rated the highest risk, and wildfires were rated the second highest. The LHMP has goals and mitigation programs to address each of the 23 hazards.

### *Corona Emergency Operations Plan*

The City of Corona has prepared an Emergency Operations Plan (EOP) to address the City's planned response to natural disasters, technological incidents, and national security emergencies. The EOP does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with such emergencies. The EOP's operational concepts focus on potential large-scale disasters that can generate unique situations requiring unusual emergency responses. The EOP's emergency management goals are:

1. Provide effective life safety measures and reduce property losses.
2. Provide for the rapid resumption of impacted businesses and community services.
3. Provide accurate documentation and records required for cost recovery efforts.

### *City of Corona Municipal Code*

*Fire Code*

As identified in Section 15.12.020 of Chapter 15.12, Fire Code, of the Corona Municipal Code, the CFC and portions of the 2015 IFC have been adopted as the City of Corona Fire Code.

*Fire Facilities Fees*

Chapter 16.23 of the CMC establishes development impact fees for new developments located citywide or within the Temescal Canyon Area Plan. Table 5.15-1, *Fire Protection Facilities Development Impact Fees*, shows the development impact fees by development type in the City and in the Temescal Canyon area.

**Table 5.15-1 Fire Protection Facilities Development Impact Fees**

| | Estate Residential | Single Family | Single Family – Attached | Multifamily[2] | Senior[2] | Assisted Care Living[2] | Mobile Home | Lodging | Com-mercial | Industrial / Manufac-turing |
|---|---|---|---|---|---|---|---|---|---|---|
| Fire Protection Area | Per dwelling unit | | | | | | | Per room | Per Square foot | |
| Citywide[3] | $352 | $349 | $466 | $466 | $1,401 | $4,032 | $349 | $314 | $0.16 | $0.02 |
| Temescal Valley | $627 | $627 | $836 | $836 | $1,401 | $4,032 | $627 | $563 | $0.29 | $0.03 |

Source: Corona 2019a.
[1] Residential developments with densities greater than 8 DU per acre are considered Multifamily.
[2] Ordinance 2993, establishing fees for Senior Restricted Attached Units and Assisted Care Living Units.
[3] Excludes the Temescal Valley area.

- Chapter 3.36 of the CMC, Fire Facilities Fee, establishes a fire facilities fee to fund the provision of fire provision services to property located within the urban/wildland interface (i.e., the Cleveland National Forest). This chapter also establishes a method of financing fire facilities required to serve properties within this special high fire area.
- Chapter 16.22 of the CMC, Temescal Canyon Public Safety Fee, establishes a fee to offset the increased costs for police and fire protection services and facilities in the Temescal Canyon area.
    - CMC Section 16.22.000, Temescal Canyon Public Safety Facility – Findings, states that the City Council finds that the development of residential, commercial, and industrial property in the Temescal Canyon area will create an increase in calls for police and fire protection services which will result in new equipment and facilities to house additional police and fire personnel and equipment to maintain current levels of service and response times within the Temescal Canyon Area.

- CMC Section 16.22.005, Temescal Canyon Area Radio Communications Tower – Findings, states that the development of residential, commercial, and industrial property in the Temescal Canyon area will create an increase in calls for police and fire protection services, thus resulting in new equipment and facilities to upgrade emergency communications for police and fire services and related equipment needed to maintain current levels of service and response times within the Temescal Canyon area of the City. This section establishes the Temescal Canyon Area Radio Communications Tower and Facilities Fee to fund the acquisition and construction costs of the Temescal Canyon Area Radio Communications Tower, and funding to maintain police and fire protection services to the Temescal Canyon area.

- CMC Section 16.23.040, Fire Facilities, Vehicles, and Equipment – Findings, sets the fees for development in the Temescal Canyon area that must be paid to accommodate for the increase in calls for fire protection services and new equipment and facilities.

- The Community Facilities District No. 2016-1 (Public Services) (CFD No. 2016-1) is a citywide assessment district subject to certain zones. CFD 2016-1 was formed in 2016 to assist in the financing of the annual costs of providing police, fire protection, and paramedic services. New residential development is required to annex into CFD 2016-1 to assist in the on-going funding of these public services due to the demand placed by development.

## Existing Conditions

### *Wildfire Hazard Severity Zones and Response*

As described in Section 5.20, *Wildfire*, Corona has a complex fire environment. It is one of the largest cities in Riverside County and at the intersection of three counties. Corona is also surrounded by extensive open space areas that are susceptible to wildfire and encroachment into the community. The Cleveland National Forest fronts the City's western border and is the source of many wildfires. Vegetation in the Chino and Corona Hills to the north and Gavilan Hills to the east is susceptible to wildfire. The majority of undeveloped area surrounding Corona has been burned by multiple wildfires and is designated a very high fire hazard severity zone by CAL FIRE.

CAL FIRE is mandated by Public Resources Code Sections 4201 to 4204 and Government Code Sections 51175 to 51189 to identify fire hazard severity zones for every community within California. The latest version dates to 2010, with revisions to be released in 2019. CAL FIRE has also mapped three hazard severity ranges—moderate, high, and very high—for most regions of California based on fuels, terrain, weather, and other factors. The City of Corona adopted its current map of VHFHSZ (very high fire hazard severity zones) pursuant to Ordinance No. 3034, adopted on June 3, 2010, which is consistent with CAL FIRE's determination.

Government Code Section 51179 allows a local agency to restrict or expand, at its discretion, the CAL FIRE identified fire hazard severity zones. A city may:

1. Exclude an area identified as a VHFHSZ from the requirements of Section 51182 following a finding supported by substantial evidence in the record that the Section 51182 requirements are not necessary for effective fire protection in the areas.

2. Designate areas as a VHFHSZ in its jurisdiction that were not identified by CAL FIRE following a finding supported by substantial evidence that Section 51182 requirements are needed for effective fire protection.

To address wildfire hazards and coordinate response, multiple government agencies (local, county, state, and federal) are responsible for fire suppression. These responsibility areas are generally described below.

- **Local Responsibility Area** (LRAs). These are areas where local jurisdictions (e.g., cities, districts, counties, and CAL FIRE if under contract) are responsible for the prevention and suppression of wildfires.

- **State Responsibility Area** (SRAs). These are the areas where the State of California has primary financial responsibility for fire prevention and suppression activities. SRA lands do not include lands within city boundaries or in federal ownership.

- **Federal Responsibility Area** (FRAs). These are areas where the federal government has primary financial responsibility for fire prevention and suppression activities. Around Corona, the federal government (US Forest Service) is responsible for suppressing fires in the Cleveland National Forest. Typically, United States Forest Service (USFS) resources are deployed solely to FRA areas, but may assist elsewhere.

- **Mutual Responsibility Area**. The City has approved mutual aid agreements with other entities to provide and receive services for certain geographic areas. These areas include the Santa Ana Canyon, SR-71, Gavilan Hills, City's SOI, and Cleveland National Forest.

### *Assets at Risk*

The City of Corona is vulnerable to and at significant risk of wildfires. Cleveland National Forest fronts the southern border, Chino and Chino Hills State Park on the north and west, and Gavilan Hills on the eastern front. Therefore, Corona is surrounded by areas with fuel mixes that could easily ignite and encroach into the community. The type and extent of vegetation and fuel, wind and climatic patterns, general topography and canyons, and other local characteristics make the City more vulnerable to wildfires. These surrounding areas are designated as VHFHSZs.

Assets at risk in Corona are in the VHFHSZs within the City and SOI areas. The City has approximately 9,300 housing units and 3.0 million square feet of office, commercial, and industrial buildings in the VHFHSZ. Additional assets include freeways (I-15 and SR-91), electrical lines not owned by the City, and some utilities. The primary assets at risk are seven water reservoirs on hillsides that provide the requisite water pressure necessary for land uses down the hill or for fire suppression.

Assets at risk in VHFHSZs in the City and SOI are:

- City of Corona (5,586 acres)
  - Housing: 5,081 units

- Commercial, Office, Industrial: 49 parcels with 1,500,000 square feet
- Infrastructure: 39 parcels containing utilities.

- SOI (10,683 acres)
  - Housing: 4,229 units
  - Commercial, Office, Industrial: 88 parcels with 1,500,000 square feet
  - Infrastructure: 69 parcels containing utilities.

As shown in Figure 5.20-2, *Very High Fire Hazard Severity Areas*, in Section 5.20*, Wildfire*, portions of the SOI are in moderate, high, and very high fire hazards areas that are outside of local responsibility areas and within a state or federal responsibility area. Table 5.15-2, *Fire Station Overview*, identifies the agencies and individual stations that serve the City of Corona and its SOI.

Table 5.15-2 Fire Station Overview

| Station Address | Equipment | Number of Staff |
|---|---|---|
| Corona Fire Department | | |
| Fire Station 1<br>540 Magnolia Avenue | Paramedic Engine Company<br>Truck Company<br>Urban Search/Rescue Vehicle (USAR)<br>Brush Engine | 8 |
| Fire Station 2<br>225 East Harrison Street | Battalion Chief<br>Paramedic Engine Company<br>OES Wildland Engine (State)<br>Reserve Engine | 5 |
| Fire Station 3<br>790 South Smith Avenue | Paramedic Engine Company<br>Squad Company<br>Brush Engine<br>OES Structure Engine<br>Reserve Engine | 4 |
| Fire Station 4<br>915 North McKinley | Paramedic Engine Co<br>HazMat Vehicle<br>HazMatTrailer<br>OES Comm. Unit (State) | 4 |
| Fire Station 5<br>1200 Canyon Crest | Paramedic Engine Company | 4 |
| Fire Station 6<br>110 West Upper Drive | Paramedic Engine Company<br>Reserve Engine<br>Water Tender | 4 |
| Fire Station 7<br>3777 Bedford Canyon | Paramedic Engine Company<br>Reserve Truck Company<br>Reserve Engine<br>Mobile Command Vehicle | 4 |

Table 5.15-2 Fire Station Overview

| Station Address | Equipment | Number of Staff |
|---|---|---|
| **County Fire Department – Riverside County Battalion 4** | | |
| Station 13<br>3777 Neece Street | Type 1 Municipal Engine | 3 |
| Station 14<br>1511 Hamner Avenue<br>*(Open during fire season only)* | Type 3 Brush Engine | 3 |
| Station 57<br>3367 Corydon | Type 1 Municipal Engine | 3 |
| Station 82<br>17452 Lake Pointe | Type 1 Municipal Engine | 3 |
| Station 47<br>3902 Hillside Avenue | Type 1 Municipal Engine | 3 |
| Station 64<br>26425 Horsethief Canyon Road | Type 1 Municipal Engine | 3 |
| **State/Federal Responsibility Area**[1] | | |
| USFS<br>1148 East 6th Street | | |
| USFS<br>24530 Temescal Canyon Road | | |

Source: Schmitz 2019; Gray 2018.
Note: Reserve Equipment not shown for Riverside County.
[1] Only open during fire season.

### *Fire Preplanning*

Corona has wildland/urban interface areas that present challenges for fire protection and suppression. In order to adequately preplan for responding to issues in those areas, the Corona Fire Department has developed Structure Protection Plans (SPPs). Each SPP contains an analysis of fire behavior associated with its terrain and fuel, evacuation routes, fire infrastructure, staging areas and tactical response, communications, and resources needed to address wildfires in the area. SPPs are available for the following areas:

- Corona Hills
- River-Corydon
- Butterfield Railroad
- Prado-Green River
- Fresno-Mindiman
- Mabey-Mangular
- Hagador Tin Mine
- Main Street-Mountain Gate
- Eagle Joseph-Crown Ranch
- Bedford Canyon-Eagle Glen
- McBride/Weirick

Wildland-interface areas in Corona have unique fire protection and suppression needs. These are the result of a limited number of nonconforming structures, natural terrain and fuel modification needs, road access limitations, and other fire protection or suppression response. The Corona Fire Department has obtained grants to begin a process leading to the preparation of a Community Wildfire Protection Plan that will continue to improve safety in the wildland-interface areas.

### *Corona Fire Department*

The City of Corona Fire Department provides fire protection and emergency medical services (fire prevention, fire operations, emergency medical services, emergency management) in the City. The Corona Fire Department also serves the communities of El Cerrito, Coronita, and Home Gardens through a service agreement with the County of Riverside. It provides secondary backup for areas covered by Riverside County Fire. Figure 5.15-1, *Fire Response Zones,* shows the response zones for the individual fire stations in Corona.

According to the City of Corona Adopted Annual Budget for Fiscal Year (FY) 2019–2020, the City has a daily total of 24 firefighters who provide a constant state of readiness from the seven fire stations, 24/7, and 107 sworn fire personnel (Corona 2019b). The Corona Fire Department has a total of 111 full-time staff members, which includes administrative and firefighting staff (Corona 2019b). The Corona Fire Department deploys its resources from the seven fire stations, each of which is assigned a defined fire response zone (see Figure 5.15-1). Changes throughout the fiscal year 2018-2019 included a net total of 0.86 full-time equivalent positions being transferred to the Administrative Services Department, from the Corona Fire Department and the Community Development Department (Corona 2019b).

#### ***Service Measures***

According to the Corona Fire Department 2018 Annual Report, the target time for fire and special operations is 6 minutes and 25 seconds; 82 percent of Corona Fire Department's response times are within this target (Corona 2018b).

According to the Draft Fire Department Operational Performance Consulting Services – Executive Summary Report, the Corona Fire Department's call-to-arrival response goal is 7 minutes and 30 seconds from 9-1-1 notification for initial units and 11 minutes and 30 seconds from 9-1-1 notification for multiple-unit effective response force (Citygate 2019). Currently, the Corona Fire Department cannot meet response time goals in the City's periphery due to the distance and/or locations of the City's fire stations.

#### ***Urban Fire Environment***

From 2014 to 2018, the Corona Fire Department responded to approximately 12,500 calls. In 2018, Corona Fire Department responded to 972 calls in the SOI areas. The number of service calls has increased by 15 percent over the prior five years. The greatest percentage of all calls, 74 percent, involved emergency medical service (EMS) and rescue. This category is primarily responsible for the 15 percent increase in calls Citywide. Table 5.15-3, *Corona Fire Department Responses,* lists the type of calls received by the Corona Fire Department. Riverside County Fire Department and responsible state and federal agencies respond to additional calls from areas outside the City.

Table 5.15-3 Corona Fire Department Responses

| Type of Calls | Call Response Volume by Year | | | | | Percent of Calls |
|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | |
| EMS/Rescue | 8,317 | 8,936 | 9,379 | 9,479 | 9,452 | 74% |
| Good Intent Call | 1,334 | 1,320 | 1,410 | 1,587 | 1,643 | 12% |
| Service Call | 804 | 787 | 881 | 869 | 880 | 7% |
| Fire Service | 351 | 385 | 391 | 429 | 400 | 3% |
| Explosion | 17 | 13 | 3 | 4 | 2 | |
| False Alarm | 353 | 427 | 409 | 420 | 453 | 3% |
| Hazardous Condition | 171 | 175 | 183 | 191 | 212 | 1% |
| All Others | 18 | 6 | 2 | 1 | 6 | <1% |
| Total | 11,358 | 12,044 | 12,660 | 12,981 | 13,048 | 100% |

Source: Cox 2017; Schmitz 2019.

The type and distribution of service calls that Corona Fire Department responds to are typical for cities across California—except for EMS/Rescue, which comprise 74 percent of the City's calls versus approximately 64 percent statewide. This difference could be due to more numerous responses to freeway accidents. Furthermore, Corona Fire Department receives a high percentage of calls from group living units, including assisted living and nursing homes.

## *County Fire Department*

### *Response Activity and Time*

The Riverside County Fire Department operates five stations that primarily serve the City's SOI. In 2016, the County responded to approximately 2,044 service calls, of which 70 percent were medical services/rescue. The County Fire average time for 'first response' is 5.8 minutes for medical service and 7.7 minutes for fire/rescue. However, the County is currently reviewing its response time standards for possible updates (Gray 2018). Table 5.15-4, *Riverside County Fire Service Calls*, shows the calls received by Riverside County Fire.

Table 5.15-4 Riverside County Fire Service Calls

| Type of Calls | Service Calls by Year | | Percent of Calls (Average of Years 2016 and 2017) |
|---|---|---|---|
| | 2016 | 2017 | |
| False Alarm | 137 | 171 | 7% |
| Hazardous Condition | 12 | 11 | 1% |
| Medical | 1,418 | 1,523 | 69% |
| Multi-Family Dwelling Fire | 1 | 0 | <1% |
| Other Fire | 50 | 54 | 2% |
| Other Miscellaneous | 26 | 37 | 1% |
| Public Service Assist | 93 | 100 | 5% |
| Rescue Fire | 10 | 15 | 1% |
| Rescue | 5 | 4 | <1% |
| Ringing Alarm | 2 | 0 | <1% |
| Standby | 51 | 51 | 1% |
| Traffic Collision | 213 | 238 | 11% |
| Vehicle Fire | 14 | 15 | 1% |
| Wildland Fire | 10 | 16 | 1% |
| Total | 2,044 | 2,237 | 100% |

Source: Gray 2018.

### *State and Federal Responsibility Areas*

CAL FIRE is the responsible state agency assigned to response and suppression of wildfires in Corona's SOI and surrounding areas. CAL FIRE Station 64 and 47 and two USFS fire stations serve the state and federal responsibility areas.

### *Mutual Aid Agreements*

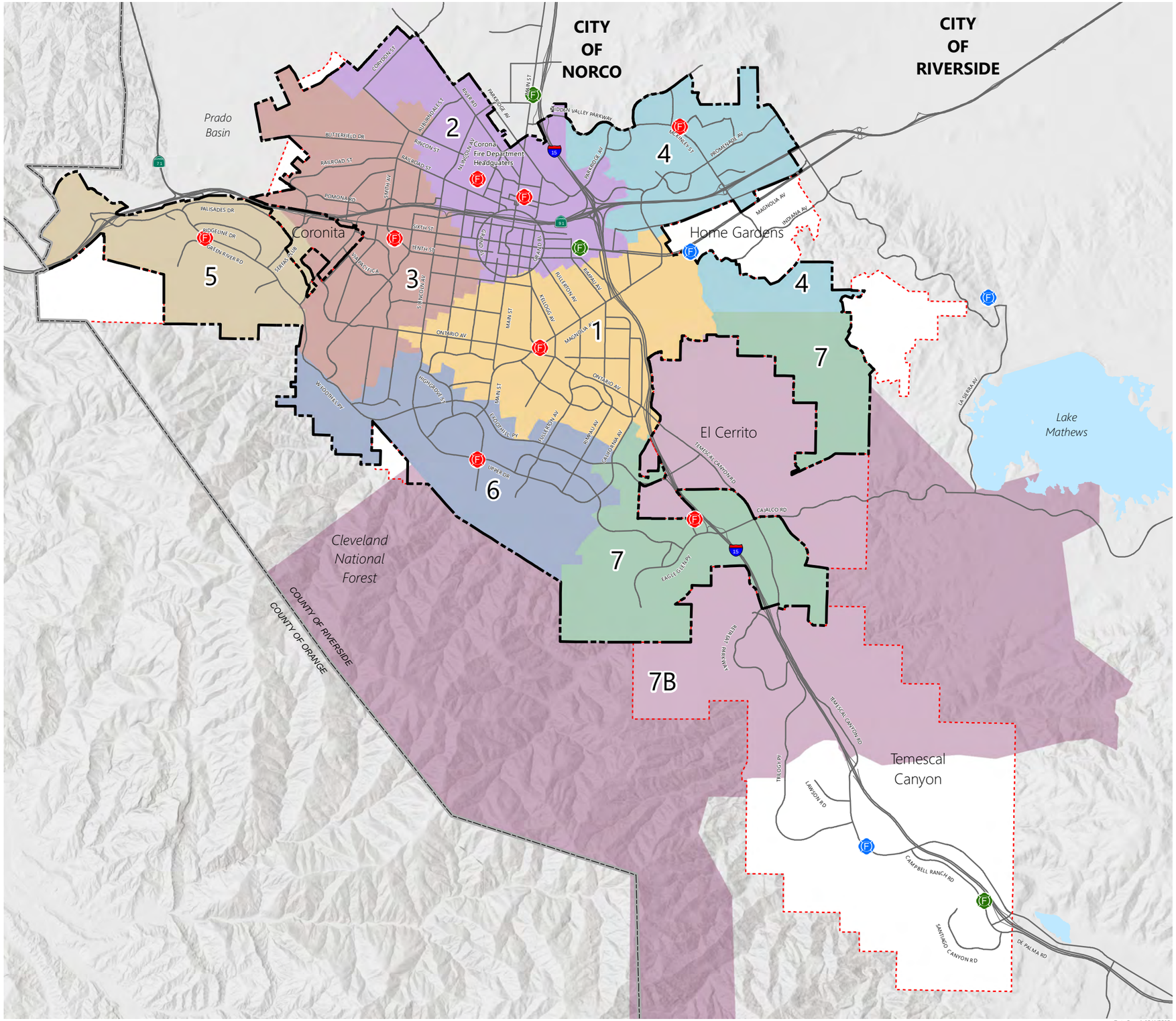
The City of Corona actively participates in a wide range of mutual aid agreements in order to improve their capability to responding to fire-related emergencies and receive assistance from neighboring agencies. Corona is under contract with Riverside County/CAL FIRE to provide fire protection and suppression services for the unincorporated communities of El Cerrito and Coronita, which are part of the City's SOI. Under this contract, the Corona Fire Department also provides backup services to Home Gardens, secondary to the services provided by County Station #13 in Home Gardens.

The Corona Fire Department maintains mutual aid agreements with:

- USDA, Cleveland National Forest (Mutual Threat Zone)
- City of Riverside Fire Department
- Chino Valley Independent Fire District
- Orange County Fire Authority
- Riverside County Fire Department
- City of Murrieta Fire Department (active shooter tactical response)
- City of Rancho Cucamonga Fire Department (active shooter tactical response)

Figure 5.15-1

# FIRE RESPONSE ZONES




## Legend

- City Boundary
- Sphere of Influence Areas

**Fire Station**

- City of Corona
- Riverside County (Sphere)
- Other Agency (State and Federal)

**Response Zones | Stations**

- 1 - Fire Station # 1, 540 Magnolia Ave
- 2 - Fire Station # 2, 222 E Harrison St
- 3 - Fire Station # 3, 790 S Smith Ave
- 4 - Fire Station # 4, 915 N Mckinley St
- 5 - Fire Station # 5, 1200 Canyon Crest Dr
- 6 - Fire Station # 6, 110 W Upper St
- 7 - Fire Station # 7, 3777 Bedford Canyon Rd
- 7B - Area Serviced by County Fire

Notes:
Corona Fire provides secondary back-up to areas outside its response zones.

*Source:*
*City of Corona Fire Department, 2019*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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- California Master Mutual Aid Agreement
- March Air Reserve Base (fire suppression, hazmat, and other emergencies)

The Corona Fire Department participates in the counties of San Bernardino, Orange, Los Angeles, and Riverside cooperative plan (SOLAR), which encompasses all agencies with fire protection responsibility along the Santa Ana River canyon area and its major north-south tributaries, where four counties join at the wildland interface areas along the 91, 71, 55, 57, and 241 highways. SOLAR is a common platform for mapping, communications, training, predesignation of facilities, and dispatch centers. Assignment of resources for response depends on the jurisdiction of the incident and agreements between parties.

### *Emergency Medical Response*

American Medical Response (AMR) maintains a contract with Riverside County Emergency Medical Services Agency to provide paramedic service and emergency medical transport in much of Riverside County, including within Corona city limits. The City of Corona does not own the legal rights to provide or to contract for ambulance transport service. The City of Corona provides paramedic assessment service, funded partially by the EMS subscription service, the EMS billing program, and a contract with AMR for paramedic cooperative response, that allows them to slightly increase their response times in Corona.

### *Fire Flow Requirements*

Ensuring adequate fire flow is an important aspect of the City's water system management. As described in the City of Corona 2005 Water Master Plan, the water system must be designed and maintained to ensure sufficient flows for normal daily demands and water demands for fire flows. The Corona Fire Department reviews plans for new development to ensure sufficient water supplies and pressure. Additionally, annexations require a Plan of Services to show that the SOI could provide sufficient water supplies and pressure if the SOI were to be incorporated. All new pipes are required to be sized to provide adequate fire flows and a minimum of 20 psi residual pressure at the hydrant outlet during fire flow. All mains are required to be constructed with a minimum diameter of 8 inches, except on short cul-de-sac dead-ends where 4-inch lines are allowed. Table 5.15-5, *Fire Flow Requirements per Land Use*, indicates the flow of water required for various land use types.

**Table 5.15-5 Fire Flow Requirements per Land Use**

| Land Use | Flow (gallons per minute) | Duration (in hours) | Residual Pressure at Hydrant Outlet (pounds per square inch) | Average Spacing between Hydrants (in feet) |
|---|---|---|---|---|
| Residential Single Family | 1,500 | 2 | 20 | 300 |
| Residential Multifamily | 2,500 | 2 | 20 | 250 |
| Schools | 3,000 | 4 | 20 | 250 |
| Commercial/Industrial | 3,500 | 4 | 20 | 250 |

Source: Fuscoe 2018.

### 5.15.1.2 THRESHOLDS OF SIGNIFICANCE

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

FP-1 Result in a substantial adverse physical impact associated with the provisions 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 fire protection services.

### 5.15.1.3 RELEVANT GENERAL PLAN POLICIES

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential fire protection and emergency service impacts as a result of implementation of the proposed project.

#### Land Use Element

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)

- **LU-4.5** Manage the timing of development and allow development to occur only when public infrastructure and services needed to support that development are available, will be provided concurrently, or are committed to be provided within a reasonable time frame.

- **LU-9.10** Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.

- **LU-15.1** Accommodate existing schools, parks, government, fire and police facilities, utility, and institutional uses suited to serving the local needs of Corona residents and business in accordance with the land use plan's designations and applicable design and development policies.

- **LU-15.2** Allow for the development of new schools, parks, government, fire and police facilities, utility, and institutional uses in any location of the City, regardless of the land use plan's designation, provided the use is environmentally suitable and compatible with adjoining land uses, and adequate infrastructure can be provided.

- **LU-22.2** Ensure that annexations to the City of Corona are consistent with the goals and policies of the general plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

- **LU-22.3** Require that existing and proposed development within proposed annexation areas generate sufficient tax or other revenue base to compensate for their fair share of community services that are provided by the City of Corona.

- **LU-22.4** Require that infrastructure and service improvements for proposed annexation areas do not create an undue burden on existing City of Corona infrastructure and services.

- **LU-22.5** Encourage that, if an area annexes to the City of Corona, a community facilities district or similar financing district shall be established to fund the provision and maintenance of sewers, streets, and other public improvements and services.

- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

### Housing Element

- **H-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

- **H-3.3** Provide public services and improvements that enhance and create neighborhood stability.

### Public Safety Element

#### *Fire Hazards*

- **PS-7.1** Require larger developments to incorporate site design features that help ensure maximum visibility and security for entrances, pathways, streets and sidewalks, corridors, public and private open space, and parking lots and structures.

- **PS-7.2** Require the incorporation of appropriate lighting that provides adequate exterior illumination around commercial, business park, public spaces, parking lots, and multifamily structures.

- **PS-7.3** Work with traffic engineers to develop methods through design, enforcement, and engineering to reduce the volume and severity of vehicle, pedestrian, and bicycling accidents citywide and around sensitive land uses such as schools, apartments, and other highly traveled uses.

- **PS-7.4** Enhance public awareness and participation in crime prevention by encouraging changes to be made through crime prevention by design (vegetation selection and maintenance, motion sensors, lighting, etc.) and establishing and participating with police in neighborhood safety and crime prevention programs (e.g. neighborhood watch).

- **PS-7.5** Require large-scale retail developments to incorporate video surveillance security systems within their facilities and grounds to monitor open public spaces and, where appropriate and feasible, provide office space for police facilities.

- **PS-7.6** Provide opportunities for police department review and input regarding appropriate methods to mitigate the impacts of land use permits that have functions and characteristics that may impose a higher than normal level of security and police protection.

- **PS-7.7** Provide appropriate security measures around sensitive essential public facilities, such as water, reclaimed water, radio towers, and other facilities required for use for public health and safety purposes.

- **PS-8.1** Provide needed fire stations and maintain them in good condition to enable timely and effective response to emergencies in keeping with city standards, community service expectations, and city financial resources.

- **PS-8.2** Ensure that fire staff at all levels are sufficient in number and appropriately trained to effectively plan and respond to all types of fire and related emergencies in the community.

- **PS-8.3** Maintain mutual aid, automatic aid, and other multi-agency cooperative agreements to ensure that urban fire, wildfire, tactical response, hazmat, and other services are available at all times.

- **PS-8.4** Regular maintain, upgrade, and replace fire apparatus and support vehicles and needed equipment to be prepared and effectively respond to fire, traffic, medical, and related emergencies.

- **PS-8.5** Conduct periodic fire-related exercises with City public safety personnel and those of nearby jurisdictions, and the state to remain prepared for situations requiring multi-jurisdictional coordinated response.

- **PS-8.6** Participate in and conduct regular training of all fire and related personnel to ensure that staff are prepared to address emergency medical, fire, and other related emergencies in the community.

- **PS-8.7** Adhere to and periodically update fire department strategic plans, policies and procedures, and other internal standards to continuously meet service level requirements and priorities, including department response times.

- **PS-8.8** Ensure that revenues are collected from new development, existing developments, and other land uses in an amount that is commensurate with their respective impact on overall city fire operations.

- **PS-8.9** Continue to monitor and adhere to the latest changes in state legislation and guidelines with respect to fire planning, prevention, and suppression.

- **PS-9.1** Continue to review and adopt the most recent edition of the California Building Standards Code (Title 24), including local amendments, to ensure the use of the latest technology and building standards in the city.

- **PS-9.2** Continue to conduct all existing occupancy inspections, including those that are state mandated within the appropriate time frame for compliance with fire safety regulations and providing education to business owners.

- **PS-9.3** Ensure that roadway, bridge and driveway standards are adequate and appropriately maintained to allow safe access to premises where emergencies take place and safe evacuations wherever needed.

- **PS-9.4** Maintain safe and accessible evacuation routes throughout the community; take precautions and ensure backup or mitigations for routes crossing high hazard areas (e.g., flood, seismic, high fire, etc.).

- **PS-9.5** Work cooperatively with city departments, community groups, and individual homeowners to ensure that vegetation management is being maintained in the designated fuel modification areas.

- **PS-9.6** Work cooperatively with CAL FIRE, US Forest Service, Department of Corrections, and other agency stakeholder to advocate for the installation and maintenance of fire breaks in wildland areas surrounding Corona.

- **PS-9.7** Encourage and provide fire safety education and support programs for residents of all ages to promote participation, fire prevention, voluntary compliance, and community awareness/preparedness.

- **PS-9.8** Work with youth in the community and local school district to tailor programs that encourage safe practices and reduce the incidence of fire and associated damages to property and personal injury.

- **PS-9.9** Conduct fire investigations as needed on residential, commercial, industrial structures and other land uses to provide protection to the community and gather information for possible trending issues.

- **PS-10.1** Locate, when feasible, new essential public facilities outside of high fire risk areas; if not feasible, require construction and other methods to harden and minimize damage for existing/planned facilities in such areas.

- **PS-10.2** Require all improved and new homes, structures, and facilities in the very high fire hazard severity zones to adhere to additional fire safe design standards consistent with state law and local practice.

- **PS-10.3** Require all improved and new developments to be thoroughly reviewed for their impact on safety and the provision of fire protection services as part of the development review process.

- **PS-10.4** Require new and rehabilitated homes and structures to meet or exceed City fire prevention standards and state law, including building access, construction design, sprinklers, and others as required by Corona Fire.

- **PS-10.5** Require all new commercial, industrial, institutional, multiple-unit housing, mixed-use, and one- and two-family dwelling developments to install fire protection systems and encourage the use of automatic sprinkler systems where not required by local codes and ordinances.

- **PS-10.6** Require fuel modification plans and vegetation clearance standards for development in VHFHSZs to protect structures from wildfire, protect wildlands from structure fires, and provide safe access routes for the community and firefighters.

- **PS-10.7** Condition approval of parcel maps and tentative maps in VHFHSZs based on meeting or exceeding the SRA Fire Safe Regulations and the fire hazard reduction around buildings and structures regulations.

- **PS-10.8** Coordinate with the Department of Water and Power to ensure that adequate water supply and flows are available for firefighting; where inadequate, ensure provision of off-site water supply and transport.

- **PS-10.9** Continue to require visible premise identification and signage per Corona's Premise Identification Guideline that meet or exceed SRA and CFC requirements.

### *Emergency Management*

- **PS-11.1** Adhere to the Standard Emergency Management System (SEMS) and the National Incident Management System (NIMS) to coordinate effective response to emergencies and disasters.

- **PS-11.2** Maintain emergency and hazard mitigation plans; update and define roles of city departments and other partnering agencies in the event of an emergency or disaster, ensuring interagency coordination and collaboration with the Operational Area (SEMS).

- **PS-11.3** Conduct periodic emergency management exercises with city personnel and nearby jurisdictions to remain prepared for situations requiring multi-jurisdictional coordinated response.

- **PS-11.4** Maintain Structure Protection Plans and other pre-planning activities and plans to remain prepared for emergencies throughout the community.

- **PS-11.5** Ensure that the Emergency Operations Plan and Standard Operating Procedures provide for efficient and orderly notification and evacuation on a citywide basis. Ensure they address accessibility issues and mass notification capabilities utilizing our city, county, state, and federal communication systems.

- **PS-11.6** Improve continuity of operations capabilities to include the development of a City of Corona Continuity of Operations Plan, in addition to enhancing the Emergency Operation Center (EOC) readiness and the EOC responder training and exercises, and continuously testing and improving upon the effectiveness of the Emergency Operation Plan.

- **PS-11.7** Sponsor and support the public education programs and outreach efforts referencing community hazards, emergency preparedness, and response protocols and procedures. Target and partner with community groups, schools, religious institutions, and business associations (NIMS).

- **PS-11.8** Facilitate planning efforts to ensure expeditious and coordinated recovery processes following any serious emergency/disaster.

- **PS-11.9** Ensure all local, state, and federal mandates are adhered to should the City proclaim a local emergency and request any state and/or federal funding.

- **PS-11.10** Participate in the review and update of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan every five years in coordination with all participating jurisdictions and Riverside County Emergency Management Department; implement goals and objectives therein to reduce risks from hazards and guide decision-making.

- **PS-10.11** Ensure all local, state, and federal mandates are adhered to should the City proclaim a local emergency and request any state and/or federal funding.

- **PS-10.12** Participate in the review and update of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan every five years in coordination with all participating jurisdictions and Riverside County Emergency Management Department; implement goals and objectives therein to reduce risks from hazards and guide decision-making.

### Healthy Community

- **HC-1.5** Consider the potential impacts of decisions related to land use, food access, active living, safe and sanitary housing, public facilities and services, and other factors that may affect the health of Corona.

- **HC-5.1** Locate and distribute, where feasible, a generally equivalent type and amount of public facilities, services, and amenities (parks, schools, police and fire services, etc.) to all areas throughout Corona. Seek to improve facilities, services, and amenities in areas deemed deficient.

- **HC-5.2** Assess the development impact fees required for new developments as necessary to ensure that appropriate levels of public facilities, services, and amenities are provided and that the demand from such development does not detract from current areas.

- **HC-5.3** Where equivalent public facilities, services, and amenities are not available or feasible, encourage and/or require public transit providers to establish and maintain routes that allow access from underserved areas to appropriate public facilities, services, and amenities.

- **HC-5.4** Establish agreements with partner agencies to provide public facilities, services, and amenities within the city. This includes public education, health services, flood protection, energy, technology and communications services, and other services as appropriate.

## 5.15.1.4 ENVIRONMENTAL IMPACTS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.15-1: The proposed project would introduce new structures, residents, and workers into the Corona Fire Department, Riverside County, and CAL FIRE service boundaries, thereby increasing the requirement for fire protection facilities and personnel. [Threshold FP-1]**

## General Plan

Buildout of the General Plan Update would result in 18,720 new residents and 13,423 new workers in the City of Corona, and 20,578 new residents and 17,733 new workers in the SOI. The increase in residents and workers in the City of Corona and its SOI would result in an increase in demand for fire services and facilities.

The Corona Fire Department has not historically met its response time goals[1] in the City's periphery areas due to the location of the fire stations. The Corona Fire Department serves as the initial attack unit for fires in the City and some areas of the SOI. The Corona Fire Department does not have the command and control structure and equipment (e.g., bulldozers and tankers) to provide services for an extended attack. Therefore, anything that requires substantial resources (e.g., wildfires over 5 acres) requires effective support from the Corona Fire Department's partners (i.e., Riverside County Fire Department, CAL FIRE, and the US Forest Service).

Fire vehicles, equipment, and expansion of existing facilities is funded partially through Development Impact Fees (DIF) from new development (Section 16.23.040 of the Corona Municipal Code). Additionally, the City created a Community Facilities District (i.e., tax assessment district) to finance the costs of providing police, fire, and paramedic services for portions of the City. However, the majority of the funds for facilities, equipment, and service personnel come from the City's General Fund. Funding from property taxes, as a result of population growth, would be expected to grow roughly proportional to any increase in residential units, businesses, and/or industrial/manufacturing in Corona and its SOI. The Corona Fire Department is financially responsible for services within the LRA, which is within the City boundaries. The additional demand for fire services and protection generated within the City would be satisfied through these sources (DIF, Community Facilities District, and General Fund).

However, over 50 percent of the population and job growth associated with the General Plan update would occur in the City's SOI, which is currently designated an SRA, which means that fires in the SOI are served by the Riverside County Fire Department and are the financial responsibility of the state (i.e., CAL FIRE).

Until the unincorporated communities within the City's SOI are incorporated into the City of Corona, staffing levels for fire services in Corona would continue to be established by the Corona Fire Department, and staffing levels for fire services in the unincorporated communities would continue to be established by the Riverside County Fire Department. If the unincorporated communities were incorporated into the City of Corona, LAFCO would require a "Plan for Services" pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Act). The Plan for Services must identify in detail how and when services will be provided and funded. Additionally, the areas in the SOI are at higher elevations and require additional infrastructure to get water uphill. Therefore, annexations may require additional water supply and infrastructure

[1] The Corona Fire Department goals are 7 minutes and 30 seconds from 9-1-1 notification for initial attack units and 6 minutes and 25 seconds for fire and special operations (Corona 2018).

(pump stations) to provide a redundant water system in the event of a wildfire. According to the Corona Fire Department, because the SOI is currently within the SRA and the City does not have the facilities, equipment, and staffing to support this area, the SOI may need to contract directly with CAL FIRE on a per-acre basis for fire services (Cox 2019). The Plan for Services for annexations would identify the recommendations for additional, equipment, and facilities to ensure the same level of service to the residents and businesses of the SOI.

The Corona Fire Department and the Riverside County Fire Department periodically review their existing resources and facilities to determine the adequacy of their fire and paramedic services. Future development projects would be reviewed by the City of Corona, Corona Fire Department, and the Riverside County Fire Department on an individual basis to ensure compliance with requirements in effect at the time building permits are issued. Ensuring that adequate fire facilities, infrastructure, and access are provided to serve the needs of the Corona Fire Department and the Riverside County Fire Department would be assessed during the development review and permit process. Future projects would also be required to comply with the adopted fire codes, building code, and nationally recognized fire and life safety standards of the State of California. As part of the 2019 Building Code adoption process, Corona Fire has amended the Fire Code to require two points of access for all new development and for areas proposing increased residential densities.

Furthermore, policies in the Public Safety Element of the General Plan Update would ensure adequate protection of public health and safety as they relate to fire and emergency services, such as Policies PS-8.1 through PS-8.9; Policies PS-9.1 PS-9.9; and Policies PS-10.1 through PS-10.9. Funding for additional staff, equipment, and facilities would come from the City's General Funds, Community Facility District Fees, and DIF fees in order to serve the growing population or through contractual requirements with CAL FIRE established in the Plan for Services for annexations. Therefore, impacts to fire protection and emergency services and facilities would be less than significant.

#### Climate Action Plan

The update to the City's Climate Action Plan (CAP) focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect fire facilities or services in the City or SOI. Consequently, implementation of the City's Climate Action Plan would result in less than significant impacts to fire protection services and facilities.

### 5.15.1.5 EXISTING REGULATIONS AND STANDARD CONDITIONS

#### Federal

- International Fire Code

#### State

- California Health and Safety Code Section 13000 et seq.
- California Health and Safety Code 25500 et seq.

- Unified Program Hazardous Materials Disclosure Programs
- California Fire Code

### Local

- Corona Municipal Code Chapter 2.52, *Emergency Management Organization*
- Corona Municipal Code Chapter 3.36, *Fire Facilities Fee*
- Corona Municipal Code Chapter 15.12, *Fire Code*
- Corona Municipal Code Chapter 16.22, *Temescal Canyon Public Safety Fee*
- Corona Municipal Code Chapter 16.23, *Development Impact Fee*

#### 5.15.1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.15-1.

#### 5.15.1.7 MITIGATION MEASURES

No significant adverse impacts were identified, and no mitigation measures are necessary.

#### 5.15.1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures are required, and impacts would remain less than significant.

## 5.15.2 Police Protection

### 5.15.2.1 ENVIRONMENTAL SETTING

### Regulatory Framework

#### *Local*

***Corona Police Department Strategic Plan (2017-2019)***

The Corona Police Department (CPD) prepares an annual police strategic plan that assesses safety in Corona, allocates staffing and resources, and sets short- and long-range goals for the future. The plan is also used to evaluate outcomes and progress to meet department goals. The current 2017-2019 edition of the Strategic Plan is the fifth update to the original 2012 Strategic Plan. The Police Department Strategic Plan contains the following 11 goals:

- Goal 1: Prevent and Suppress Crime
- Goal 2: Maintain Adequate Staffing Ratios
- Goal 3: Maintain an Emergency Response within Five-Minutes
- Goal 4: Radio Interoperability – More Robust System
- Goal 5: Maintain and Enhance Partnerships with the Community
- Goal 6: Implement Department Wide "Succession and Success" Plan and Mentor

- Goal 7: Enhance In-House Technology and Equipment
- Goal 8: Enhance and Expand City-Wide Camera Systems
- Goal 9: Animal Services and Enforcement
- Goal 10: Fiscal Efficiency
- Goal 11: Ongoing Department Review of Practices, Procedures, and Policies

### *Project Safety Net*

The Corona-Norco Unified School District has made it a priority to ensure a safe school environment and is actively working with the CPD. The Corona-Norco Unified School District has adopted a School Safety Plan which includes:

- School District Policy. The District has adopted a zero-tolerance policy on school bullying.
- Safety Personnel. School resource officers and security attendants are assigned to each school to address a range of safety concerns.
- Suicide Prevention and Crisis Intervention Teams. The District assigns trained staff to all schools to identify and assist students in need.
- School Safety Plan. The District maintains a comprehensive school safety plan that complies with the California Education Code, Section 35294.2.
- Bicycle/Pedestrian Safety. The District has partnered with the Corona Police Department, Riverside County Public Health Department, and others to publish a safety plan.

### *City of Corona Municipal Code*

*Emergency Management*

Chapter 2.52, Emergency Management Organization, provides for the preparation and carrying out of plans to protect people and property within the City of Corona during an emergency or disaster event.

*Police Facilities Fees*

The City's municipal code establishes development impact fees to fund police services and facilities for new residential development in the City and in the Temescal Canyon area. Table 5.15-6, *Police Protection Facilities Development Impact Fees,* shows the development impact fees by development type.

Table 5.15-6 Police Protection Facilities Development Impact Fees

| Law Enforcement | Estate Residential | Single Family | Single Family Attached | Multi-family[1] | Senior Restricted Attached[2] | Assisted Care Living[2] | Mobile Home | Commercial Lodging | Com-mercial | Industrial / Manufac-turing |
|---|---|---|---|---|---|---|---|---|---|---|
| | Per Dwelling Unit | | | | | | | Per Room | Per Square Foot | |
| Citywide, excluding Temescal Valley | $212 | $212 | $91 | $366 | $30 | $140 | $212 | $496 | $0.18 | $0.01 |
| Temescal Valley | $338 | $338 | $146 | $583 | $30 | $140 | $338 | $791 | $0.28 | $0.02 |

Source: Corona 2019a.
[1] Residential developments with densities greater than 8 dwelling units per acre are considered Multifamily.
[2] Ordinance 2993, establishing fees for Senior Restricted Attached Units and Assisted Care Living Units.

- Section 16.23.030, Law Enforcement Facilities, Vehicles, and Equipment – Findings, of Chapter 16.23, Development Impact Fees, states that the development of residential property will create a need for increased police protection services, thus, fees must be paid to accommodate for the increase in calls for fire protection services.

- Chapter 16.22, Temescal Canyon Public Safety Fee, establishes a Temescal Canyon Area Radio Communications Tower and Facilities Fee to offset the increased costs for police and fire protection services and facilities in the Temescal Canyon area.

  - Section 16.22.000, Temescal Canyon Public Safety Facility – Findings, states that the City Council finds that the development of residential, commercial, and industrial property in the Temescal Canyon Area will create an increase in calls for police and fire protection services which will result in new equipment and facilities to house additional police and fire personnel and equipment to maintain current levels of service and response times within the Temescal Canyon Area.

  - Section 16.22.005, Temescal Canyon Area Radio Communications Tower – Findings, states that the development of residential, commercial, and industrial property in the Temescal Canyon Area will create an increase in calls for police and fire protection services, thus resulting in new equipment and facilities to upgrade emergency communications for police and fire services and related equipment needed to maintain current levels of service and response times within the Temescal Canyon Area of the City. This section establishes the Temescal Canyon Area Radio Communications Tower and Facilities Fee to fund the acquisition and construction costs of the Temescal Canyon Area Radio Communications Tower, and funding to maintain police and fire protection services to the Temescal Canyon Area.

- The Community Facilities District No. 2016-1 (Public Services) (CFD No. 2016-1) is a citywide assessment district subject to certain zones. CFD 2016-1 was formed in 2016 to assist in the financing of the annual costs of providing police, fire protection, and paramedic services. New residential development is required

to annex into CFD 2016-1 to assist in the on-going funding of these public services due to the demand placed by development.

## Existing Conditions

### *Corona Police Department*

The CPD provides 24/7 services to residents and businesses of Corona. CPD is supported by civilian staff, a Communications Center, Animal Services and Enforcement, and nonsworn staff that handle not-in-progress calls and jail bookings. The Department offers field services, school services, traffic control, investigation services, aviation services (by contract), and support services. Additionally, the Corona Police Department supports various nonprofits; the Corona Police Community Partnership (CPCP) is a nonprofit organization that works to enhance the cooperation between police and the citizens of Corona.

#### *Police Facilities*

The Corona Police Department operates out of its headquarters on 730 Public Safety Way, with several branch offices situated throughout its service area. Figure 5.15-2, *Police and Sheriff Patrol Zones*, illustrate the patrol zones for the Corona Police Department and Riverside County Sheriff Department. The Corona Police Department provides other police facilities that are intended to serve designated geographic district or specialized functions that serve all of Corona. These facilities are:

- Special Enforcement Unit which includes traffic bureau, youth services, and a domestic violence unit
- Zone 2 Office, which is a satellite office for field officers and volunteers
- Narcotics/Vice investigative office
- Animal Control Unit, which is responsible for addressing all community issues involving animals

#### *Crime Levels*

Compared to its peer cities in the County, the City of Corona is consistently ranked as one of the safest communities. The City's violent crime rate is 70 percent below the average for the state of California. In 2016, the number of violent crimes and property crimes were 185 and 3,705, respectively (Corona 2017). While violent crime increased in 2017, Corona is still safer than its peer cities. Corona's overall low crime rate has been attributed to proactive crime suppression and prevention efforts, including its ongoing community policies philosophy.

#### *Road Safety*

Corona averaged approximately 1,800 vehicle collisions, 31 bicycle-vehicle accidents, 47 pedestrian-vehicle collisions, and approximately 1 vehicle-train collision, from 2014 to 2017. While the number of accidents increased from 2014 to 2016, the accidents have moderated in number during 2017 down to levels before the SR-91 was improved. The main exceptions are that both bicycle and pedestrian collisions gradually increased.

### *Performance Standards*

The following response time and staffing metrics are used to evaluate the effectiveness of the police services provided to the community:

*Response Times*

The Corona Police Department categorizes its calls as follows:

- Priority 1 – life-threatening
- Priority 2 – urgent but not life threatening
- Priority 3 – routine reports
- Priority 4 – generally officer-initiated activity, such as routine back-ups, traffic violations, and other miscellaneous activities

The estimated 2019-2020 response time to priority 1 calls is 5 minutes and 17 seconds (Corona 2019b).

*Staffing*

The City of Corona utilizes the officers-per-thousand-residents ratio that is referenced by the Federal Bureau of Investigations and State and Federal Departments of Justice. The City strives to maintain a ratio of one officer per thousand residents.

The 2019-2020 fiscal year budget states that there are 149 sworn police personnel (Corona 2019b). Position changes in the fiscal year 2018-2019 included the Police Department transferring a net total of two positions to the Administrative Services Department (Corona 2019b). Changes in the adopted fiscal year 2019-2020 resulted in a net increase of 6 staff due to service level changes (Corona 2019b). The estimated 2019-2020 officers-per-thousand-residents ratio is 0.91, which is slightly lower than the goal of one officer per one thousand residents (Corona 2019b).

## *Riverside County Sheriff's Department*

The Riverside County Sheriff's Department provides services to the City's SOI through two stations—Jurupa Valley Station and Lake Elsinore Station. The Jurupa Valley Station, provides services for Coronita, Home Gardens, and El Cerrito. The Lake Elsinore Station is responsible for serving Temescal Valley, including within the City's SOI. In addition to the services provided by the Riverside County Sheriff's Department, the California Highway Patrol is responsible for traffic enforcement within the SOI, and mutual aid agreements are in place for jurisdictions to assist one another, as requested.

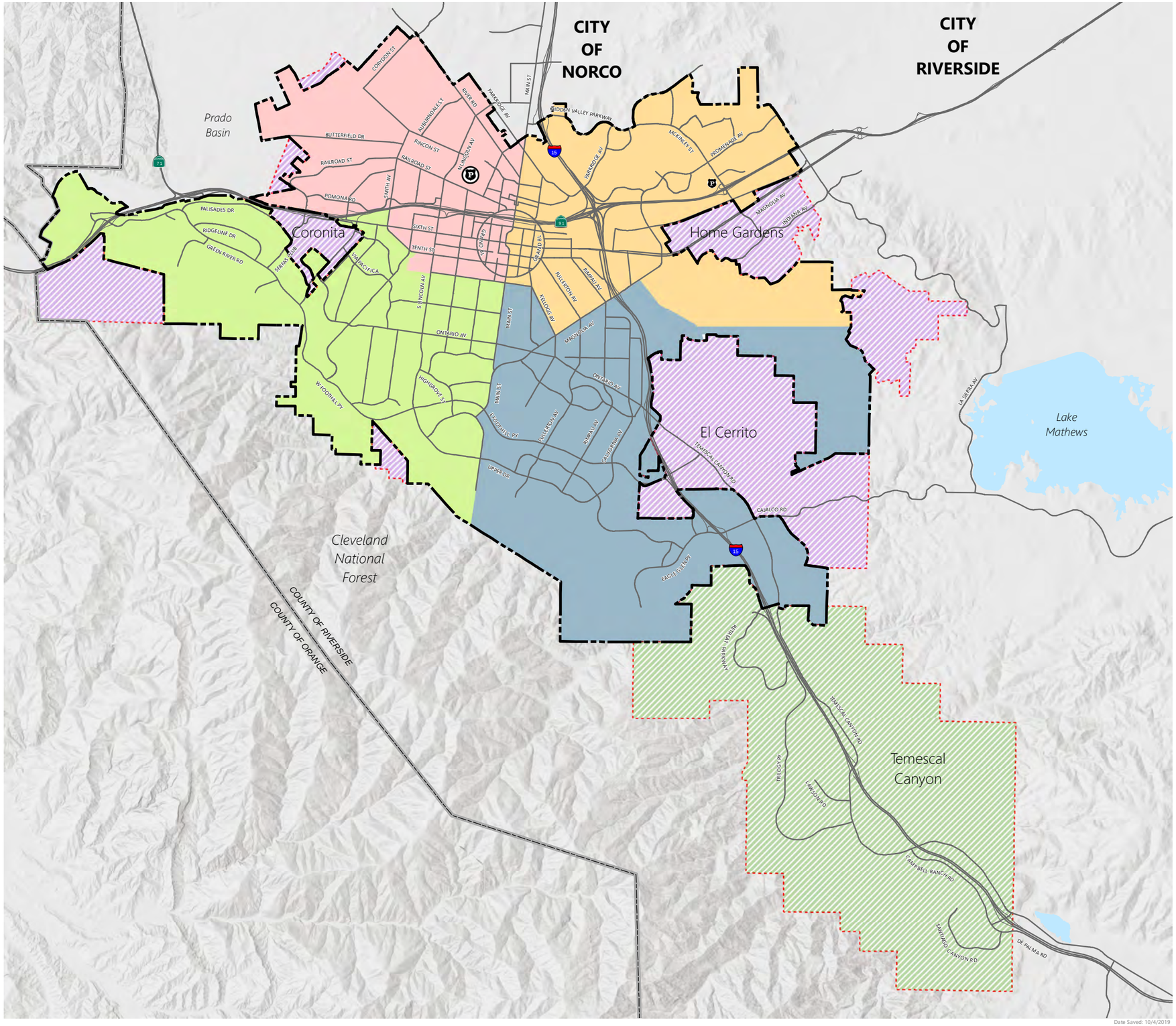


Figure 5.15-2

# POLICE AND SHERIFF PATROL ZONES

## Legend

- Main Police Station
- Sub-Station

**Corona Police Patrol Zones**

- Zone 1
- Zone 2
- Zone 3
- Zone 4

**Riverside County Sheriff Patrol Zones**

- Jurupa Valley Station
- Lake Elsinore Station
- City Boundary
- Sphere of Influence Areas

Notes:
The Coronita, El Cerrito, Home Gardens areas are serviced by the Jurupa Valley Sheriff's Office.
Temescal Valley area is serviced by the Lake Elsinore Sheriff Station.

*Source:*
*City of Corona 2017*
*Riverside County 2017*

Date Saved: 10/4/2019

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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### 5.15.2.2 THRESHOLDS OF SIGNIFICANCE

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

PP-1 Result in a substantial adverse physical impact associated with the provisions 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 police protection services.

### 5.15.2.3 RELEVANT GENERAL PLAN POLICIES

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential police protection impacts as a result of implementation of the proposed project.

#### Land Use Element

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)

- **LU-4.5** Manage the timing of development and allow development to occur only when public infrastructure and services needed to support that development are available, will be provided concurrently, or are committed to be provided within a reasonable time frame.

- **LU-9.10** Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.

- **LU-15.1** Accommodate existing schools, parks, government, fire and police facilities, utility, and institutional uses suited to serving the local needs of Corona residents and business in accordance with the land use plan's designations and applicable design and development policies.

- **LU-15.2** Allow for the development of new schools, parks, government, fire and police facilities, utility, and institutional uses in any location of the City, regardless of the land use plan's designation, provided the use is environmentally suitable and compatible with adjoining land uses, and adequate infrastructure can be provided.

- **LU-15.3** Promote collaborative and creative solutions between the public and private sectors to develop additional schools, parks, and other public facilities in the City and sphere of influence.

- **LU-22.2** Ensure that annexations to the City of Corona are consistent with the goals and policies of the general plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

- **LU-22.3** Require that existing and proposed development within proposed annexation areas generate sufficient tax or other revenue base to compensate for their fair share of community services that are provided by the City of Corona.

- **LU-22.4** Require that infrastructure and service improvements for proposed annexation areas do not create an undue burden on existing City of Corona infrastructure and services.

- **LU-22.5** Encourage that, if an area annexes to the City of Corona, a community facilities district or similar financing district shall be established to fund the provision and maintenance of sewers, streets, and other public improvements and services.

- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

### Housing Element

- **H-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

- **H-3.3** Provide public services and improvements that enhance and create neighborhood stability.

### Public Safety Element

#### *Police Services*

- **PS-5.1** Ensure that police staffing, facilities, and equipment are expanded commensurably to serve the needs of the City's growing population, business community, and visitor population.

- **PS-5.2** Identify and provide sites for police facility location(s) or substations in different locations based on community need, phasing, and timing; periodically assess the needs for establishing or relocating substations.

- **PS-5.3** Assess the impacts of incremental increases in community development and resulting impacts on traffic congestion, municipal infrastructure capacity, and emergency response times. Ensure through the design review process that proposed projects provide mitigation to maintain law enforcement services at acceptable, safe levels.

- **PS-5.4** Periodically evaluate population growth, development characteristics, level of service, and incidence of crime in the City of Corona to ensure that an adequate level of police service is maintained.

- **PS-5.5** Require new and expanded development projects or those in which change operations to contribute an appropriate amount of impact fees based on their proportional impact and demand for police services.

- **PS-5.6** Cooperate with all Riverside County law enforcement agencies and other public safety providers to provide backup police assistance and mutual aid in emergency situations.

- **PS-5.7** Conduct periodic police related emergency management exercises with City personnel and surrounding jurisdictions to maintain readiness for emergency situations should they arise.

- **PS-5.8** Strive to meet police response times for Priority 1 calls throughout the community consistent with the departmental strategic plan and level of service objectives.

- **PS-5.9** Continue to work the Corona-Norco Unified School District to provide services that make school environments safe and welcoming places for learning and personal enrichment and growth for students.

- **PS-6.1** Continue to coordinate through a regularly updated City Service Delivery Plan, the provision of police and fire services with all other public safety and responsiveness programs in order to meet community needs.

- **PS-6.2** Encourage, facilitate, and participate, where appropriate, in communications between police service providers and Corona residents to address issues of responsiveness and sensitivity that may arise.

- **PS-6.3** Review with the public safety service provider's problems of responsiveness and sensitivity and discuss means of resolution if and when there are a high frequency and repetition of complaints.

- **PS-6.4** Encourage, facilitate, and participate in the training of police personnel to be responsive and sensitive to the needs of all of the City of Corona's residents, while maintaining a high level of service and protection.

- **PS-6.5** Aggressively pursue conformance with the City's nondiscriminatory hiring policies by all public safety providers.

- **PS-6.6** Interact and extend police support to venues for youth activities of community-based groups, Parks and Recreation Department, and other groups to help reduce youth-generated crime in the City.

- **PS-7.1** Require larger developments to incorporate site design features that help ensure maximum visibility and security for entrances, pathways, streets and sidewalks, corridors, public and private open space, and parking lots and structures.

- **PS-7.2** Require the incorporation of appropriate lighting that provides adequate exterior illumination around commercial, business park, public spaces, parking lots, and multifamily structures.

- **PS-7.3** Work with traffic engineers to develop methods through design, enforcement, and engineering to reduce the volume and severity of vehicle, pedestrian, and bicycling accidents citywide and around sensitive land uses such as schools, apartments, and other highly traveled uses.

- **PS-7.4** Enhance public awareness and participation in crime prevention by encouraging changes to be made through crime prevention by design (vegetation selection and maintenance, motion sensors, lighting, etc.) and establishing and participating with police in neighborhood safety and crime prevention programs (e.g. neighborhood watch).

- **PS-7.5** Require large-scale retail developments to incorporate video surveillance security systems within their facilities and grounds to monitor open public spaces and, where appropriate and feasible, provide office space for police facilities.

- **PS-7.6** Provide opportunities for police department review and input regarding appropriate methods to mitigate the impacts of land use permits that have functions and characteristics that may impose a higher than normal level of security and police protection.

- **PS-7.7** Provide appropriate security measures around sensitive essential public facilities, such as water, reclaimed water, radio towers, and other facilities required for use for public health and safety purposes.

### Healthy Community

- **HC-1.5** Consider the potential impacts of decisions related to land use, food access, active living, safe and sanitary housing, public facilities and services, and other factors that may affect the health of Corona.

- **HC-5.1** Locate and distribute, where feasible, a generally equivalent type and amount of public facilities, services, and amenities (parks, schools, police and fire services, etc.) to all areas throughout Corona. Seek to improve facilities, services, and amenities in areas deemed deficient.

- **HC-5.2** Assess the development impact fees required for new developments as necessary to ensure that appropriate levels of public facilities, services, and amenities are provided and that the demand from such development does not detract from current areas.

- **HC-5.3** Where equivalent public facilities, services, and amenities are not available or feasible, encourage and/or require public transit providers to establish and maintain routes that allow access from underserved areas to appropriate public facilities, services, and amenities.

- **HC-5.4** Establish agreements with partner agencies to provide public facilities, services, and amenities within the city. This includes public education, health services, flood protection, energy, technology and communications services, and other services as appropriate.

### 5.15.2.4 ENVIRONMENTAL IMPACTS

**Impact 5.15-2: The proposed project would introduce new structures, residents, and workers into the Corona Police Department's service boundaries, thereby increasing the requirement for police protection facilities and personnel. [Threshold PP-1]**

#### General Plan

Implementation of the proposed General Plan Update would introduce an additional 18,720 residents and 13,423 workers in the City of Corona, and 20,578 residents and 17,733 workers in the City's SOI. Thus, there would be an increase in demand for police services in both the City and the SOI.

According to the 2017-2018 Corona Police Strategic Plan, one of the Corona Police Department's goals is to maintain adequate staffing rations, which states that a minimum of one officer per thousand residents is recommended (Corona 2017). The goal, to maintain adequate staffing ratios, states that the Corona Police Department will fill all full-time civilian and sworn staff vacant positions and that these positions should remain filled in the future (Corona 2017). Some of the Corona Police Department's recommended approaches to fulfilling this goal are to monitor impacts to population, and crime and response numbers when evaluating the staffing needs and to seek the continuation of funding for any sworn public safety position where funding is ending either due to contract termination or changes in state allocation (Corona 2017). The SP 2016-2019 Accomplishments and Notes section of the 2017-2018 Corona Police Department Strategic Plan states the following fulfillments:

- Authorized a new Public Safety Dispatcher I/II position in FY 2016-2017 budget.
- Internally funded a new Rangemaster position in FY 2016-2017 budget.
- Personnel and Training hired 26 employees in FY 2015-2016.
- The Corona Police Department promoted 22 employees in FY 2015-2016 (Corona 2017).

The proposed project would introduce a total of 39,298 residents—18,720 residents in the City and 20,578 residents in the SOI. Based on the City's service goal of one officer per 1,000 residents, the police department would need to hire an additional 19 officers to accommodate the population growth in the City of Corona[2] and 21 officers to accommodate the growth in the SOI,[3] for a total of 40 officers. However, staff needs could vary greatly based on crime trends, special events, and City and SOI needs, so staffing needs could be higher or lower. The additional officers would not be hired all at the same time, as the growth in population would occur over a period of time. Moreover, the hiring of the additional officers would be dependent on the department's assessed needs, based primarily on the growing number of calls for service or decreases in average response times in the future.

[2] 18,720 residents / 1,000 x 1 officer = 18.7 (19) officers
[3] 20,578 residents / 1,000 x 1 officer = 20.6 (21) officers

Funds for additional police facilities, equipment, and officers would come from the DIF collected from new residential, commercial, and industrial/manufacturing developments, as noted in Table 5.15-6. Additionally, the City created a Community Facilities District (i.e., tax assessment district) to finance the costs of providing police, fire, and paramedic services for portions of the City. However, the majority of the funds for facilities, equipment, and service personnel come from the City's General Fund. Funding from property taxes, as a result of population growth, would be expected to grow roughly proportional to any increase in residential units, businesses, and/or industrial/manufacturing in Corona and its SOI. The additional demand for police services generated within the City would be satisfied through these sources (DIF, Community Facilities District, and General Fund).

However, over 50 percent of the population and job growth associated with the General Plan update would occur within the SOI, which is currently served by the Riverside County Sheriff's Department. Police services staffing levels in the City of Corona would continue to be established by the Corona Police Department, and the Riverside County Sheriff's Department would continue to establish staffing levels for police services in the unincorporated communities until the unincorporated communities in the SOI are incorporated into the City of Corona. The Corona Police Department would provide police services to newly incorporated areas, and LAFCO would require a "Plan for Services" pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. The Plan for Services must identify in detail how and when services will be provided and funded and the recommendations for additional staff, equipment, and facilities to ensure the same level of service to the residents and businesses of the SOI for police services.

Furthermore, goals and policies in the Public Safety Element of the General Plan Update would ensure adequate protection of police services:

- **Goal PS-5** Ensure that there is an adequate service level of law enforcement services provided for all residents, visitors, and businesses throughout the City of Corona. (Policies PS-5.1 through PS-5.9).

- **Goal PS-6** Ensure that police services are provided in a manner that reflects and is sensitive to the characteristics and needs of resident population, visitors, and business community. (Policies PS-6.1 through PS-6.6).

- **Goal PS-7** Encourage the use of land use and development configuration and site design standards within residential and other developments to minimize crime and improve the safety for residents, visitors, and employees. (Policies PS-7.1 through PS-7.7).

As development increases in the City and SOI, the available funds from taxes, Community Facility District Fees, and DIF received from such development, and additional requirements outlined in the Plan for Services for annexations would provide the additional facilities, equipment, and officers needed to serve the growing population. Therefore, impacts to police services would be less than significant.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated

by existing and proposed land uses in the City. The CAP would not affect police facilities or services in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to police services and facilities.

#### 5.15.2.5 EXISTING REGULATIONS AND STANDARD CONDITIONS

##### Local

- Corona Municipal Code Chapter 2.52, Emergency Management Organization
- Corona Municipal Code Chapter 16.22, Temescal Canyon Public Safety Fee
- Corona Municipal Code Chapter 16.23, Development Impact Fee

#### 5.15.2.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.15-2.

#### 5.15.2.7 MITIGATION MEASURES

No significant adverse impacts were identified, and no mitigation measures are necessary.

#### 5.15.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures are required, and impacts would remain less than significant.

### 5.15.3 School Services

#### 5.15.3.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

###### *State*

***California State Assembly Bill 2926: School Facilities Act of 1986***

To assist in providing school facilities to serve students generated by new development, Assembly Bill (AB) 2926 was enacted in 1986 and authorizes a levy of impact fees on new residential and commercial/industrial development. The bill was expanded and revised in 1987 through the passage of AB 1600, which added Sections 66000 et seq. to the Government Code. Under this statute, payment of impact fees by developers serves as CEQA mitigation to satisfy the impact of development on school facilities.

***California Senate Bill 50***

Senate Bill (SB) 50, passed in 1998, provides a comprehensive school facilities financing and reform program and enables a statewide bond issue to be placed on the ballot. Under the provisions of SB 50, school districts are authorized to collect fees to offset the costs associated with increasing school capacity as a result of development and related population increases. The funding goes to acquiring school sites, constructing new

school facilities, and modernizing existing school facilities. SB 50 establishes a process for determining the amount of fees developers would be charged to mitigate the impact of development on school districts from increased enrollment. According to Section 65996 of the California Government Code, development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation."

Under this legislation, there are three levels of developer fees that may be imposed upon new development by the governing school district. Level I fees are assessed based upon the proposed square footage of residential, commercial/industrial, and/or parking structure uses. Level II fees require the developer to provide one-half of the costs of accommodating students in new schools, and the state provides the remaining half. To qualify for Level II fees, the governing board of the school district must adopt a School Facilities Needs Analysis and meet other prerequisites in accordance with Section 65995.6 of the California Government Code. Level III fees apply if the state runs out of bond funds, allowing the governing school district to impose 100 percent of the cost of school facility or mitigation minus any local dedicated school monies on the developer.

## Existing Conditions

The Corona-Norco Unified School District (CNUSD) serves most adults and youth in Corona, which includes K-12 education, alternative education, and adult education. There are 34 schools that serve more than 33,000 students in the community. Corona has 14 private schools—Montessori schools, alternative education, and religious schools. Figure 5.15-3, *School Facilities and Districts*, shows the locations of elementary schools, middle schools, and high schools in both the City of Corona and its SOI. The Alvord Unified School District serves portions of the eastern part of the City of Corona and its SOI, while CNUSD serves the majority of the City of Corona, as well as the following SOI communities: Coronita, the western portion of Home Gardens, El Cerrito, and Temescal Canyon. Table 5.15-7 provides the current enrollment per school in CNUSD within the City of Corona. Promenade Elementary Schools is the only school in the City of Corona that is a part of the Alvord Unified School District (AUSD). Figure 5.15-3, *School Facilities and Districts,* shows the locations of the schools and the District boundary areas.

Table 5.15-7 Current School Enrollment of Schools Serving Corona and SOI

| School and Location | Enrollment 2018 | Total Capacity |
|---|---|---|
| Elementary School | | |
| Benjamin Franklin<br>2650 Oak Avenue | 810 | 1,045 |
| Cesar Chavez[1]<br>1150 Paseo Grande | 382 | 667 |
| Corona Ranch<br>785 Village Loop Drive | 993 | 1,129 |
| Coronita<br>1757 Via Del Rio | 547 | 985 |
| Dr. Bernice Todd[1]<br>25105 Mayhew Canyon Drive | 933 | 957 |
| Dwight D. Eisenhower<br>3355 Mountain Gate Drive | 887 | 1,126 |
| Foothill<br>2601 South Buena Vista Avenue | 908 | 1,503 |

Table 5.15-7 Current School Enrollment of Schools Serving Corona and SOI

| School and Location | Enrollment 2018 | Total Capacity |
|---|---|---|
| Garretson<br>1650 Garretson Avenue | 985 | 1,382 |
| Home Gardens[1]<br>13550 Tolton Avenue | 815 | 891 |
| Jefferson<br>1040 South Vicente Avenue | 687 | 828 |
| John Adams<br>2350 Border Avenue | 673 | 810 |
| John Stallings<br>1980 Fullerton Avenue | 568 | 868 |
| Lincoln Fundamental<br>1041 Fullerton Avenue | 826 | 1,100 |
| Orange<br>1350 Valencia Road | 679 | 1,181 |
| Parkridge<br>750 Corona Avenue | 808 | 1,017 |
| Prado View<br>2800 Ridgeline Drive | 721 | 1,016 |
| Promenade<br>550 Hamilton Street | 698 | 698[2] |
| Susan B. Anthony<br>2665 Gilbert Avenue | 842 | 1,109 |
| Temescal Valley<br>22950 Claystone Avenue | 967 | 1,084 |
| Vicentia<br>2005 South Vicentia Avenue | 619 | 969 |
| William McKinley<br>2050 Aztec Lane | 640 | 848 |
| Woodrow Wilson<br>1750 Spyglass Drive | 830 | 1,136 |
| Total | 16,120 | 28,633 |
| Intermediate/Middle Schools | | |
| Auburndale Intermediate<br>1255 River Road | 677 | 1,250 |
| Cesar Chavez[1]<br>1150 Paseo Grande | 531 | 667 |
| Citrus Hill Intermediate<br>3211 South Main Street | 1,086 | 2,072 |
| Corona Fundamental Intermediate<br>1230 South Main Street | 838 | 920 |
| Dr. Bernice Todd[1]<br>25105 Mayhew Canyon Drive | 244 | 546 |
| El Cerrito Middle<br>7610 El Cerrito Road | 1,163 | 1,424 |
| Home Gardens[1]<br>13550 Tolton Avenue | 186 | 420 |

Table 5.15-7 Current School Enrollment of Schools Serving Corona and SOI

| School and Location | Enrollment 2018 | Total Capacity |
|---|---|---|
| Letha Raney Intermediate<br>1010 West Citron | 745 | 1,273 |
| Total | 5,470 | 8,572 |
| High Schools | | |
| Centennial<br>1820 Rimpau Avenue | 3,055 | 3,750 |
| Corona<br>1150 West Tenth Street | 2,595 | 3,646 |
| Lee Pollard<br>185 Magnolia Avenue | 595 | 1,040 |
| Orange Grove<br>300 Buena Vista Avenue | 125 | 174 |
| Santiago<br>1395 Foothill Parkway | 3,751 | 4,204 |
| Total | 10,121 | 12,814 |

Source: Vondriska 2018; AUSD 2018; CDE 2018.
Notes: Other types of schools within CNUSD, such as Alternative Learning Experience and Service Schools, are not listed in this table.
[1] Cesar Chavez, Dr. Bernice Todd, and Home Gardens are academies (K-8).
[2] There is no School Accountability Report Card (SARC) from the California Department of Education (CDE) for the Promenade Elementary School in the AUSD; therefore, it is assumed that capacity is equivalent to enrollment.

## *Funding*

### *SB 50 Fees*

CNUSD has adopted a fee program, pursuant to SB 50:

- Residential – $3.79 per square foot
- Commercial/Industrial/Age-Restricted Construction – $0.61 per square foot (Vondriska 2018)

According to CNUSD, Community Facilities District (CFD) developer fees vary per contract, and may not be subject to Level One Fees (Vondriska 2018).

### *Measure U*

In 2006, the voters in CNUSD approved Measure U, a $250 million general obligation bond for the construction, reconstruction, rehabilitation, or replacement of school facilities.

### *Measure GG*

In 2014, the voters of Riverside County approved Measure GG, authorizing the issuance of a general obligation bond of $396 million. This bond is being used for CNUSD schools located in the unincorporated areas of Corona (Home Gardens, Temescal Valley, Coronita, and El Cerrito), as well as Norco and Eastvale.

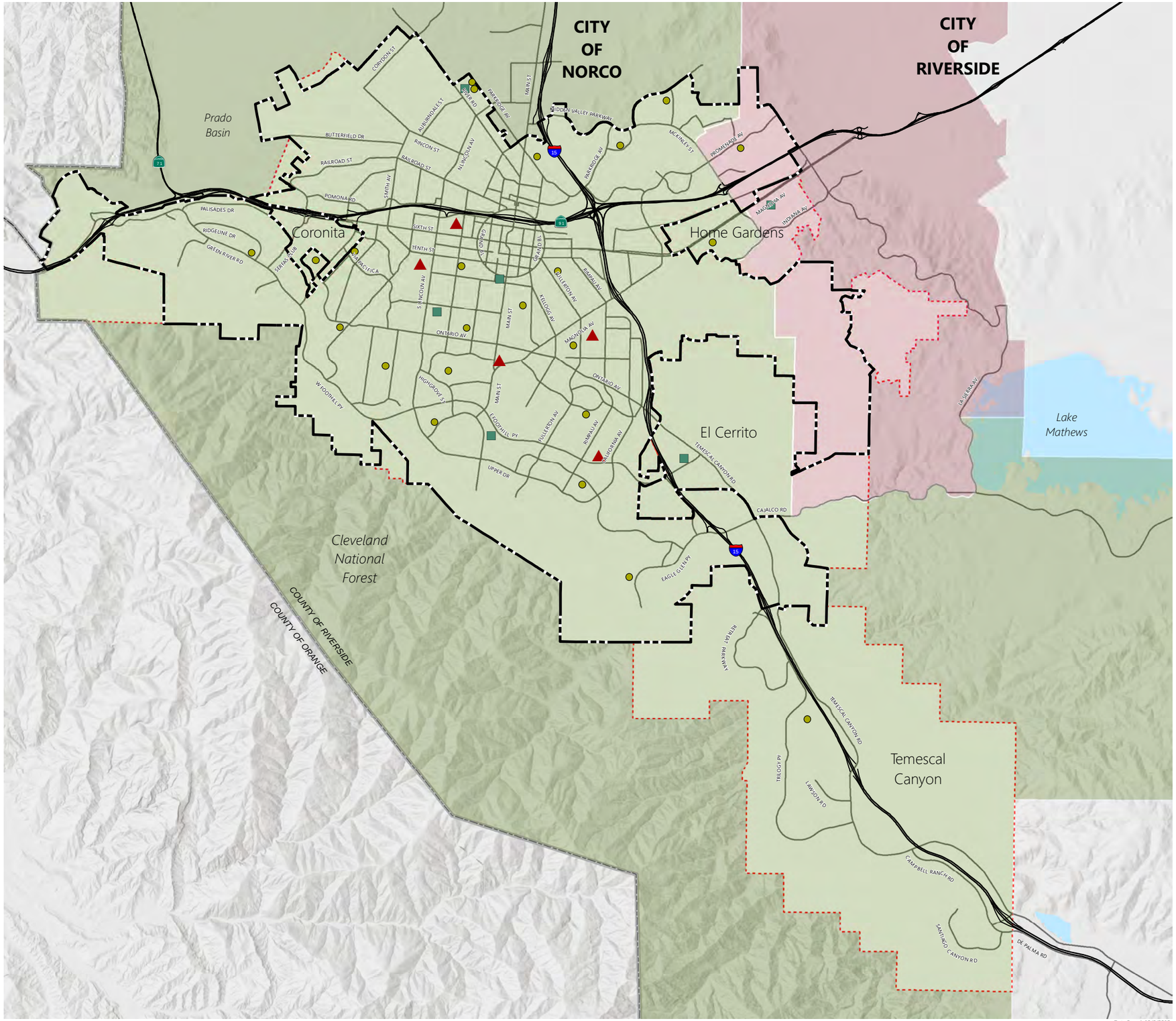


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Figure 5.15-3

# SCHOOL FACILITIES AND DISTRICTS

## Legend

- City Boundary
- Sphere of Influence Areas

**School Type**

- Elementary School
- Intermediate / Middle School
- High School

**SchoolDistricts**

- Alvord Unified School District
- Corona-Norco Unified School District

1 - ADAMS ELEMENTARY
2 - ANTHONY ELEMENTARY
3 - AUBURNDALE INTERMEDIATE
4 - CENTENNIAL HIGH
5 - CHAVEZ ELEMENTARY
6 - CITRUS HILL INTERMEDIATE
7 - CORONA FUNDAMENTAL INTERMEDIATE
8 - CORONA HIGH
9 - CORONA RANCH ELEMENTARY
10 - CORONITA ELEMENTARY
11 - EISENHOWER ELEMENTARY
12 - EL CERRITO MIDDLE
13 - FOOTHILL ELEMENTARY
14 - FRANKLIN ELEMENTARY
15 - GARRETSON ELEMENTARY
16 - HOME GARDENS ELEMENTARY
17 - JEFFERSON ELEMENTARY
18 - LEE POLLARD HIGH SCHOOL
19 - LINCOLN ELEMENTARY
20 - MCKINLEY ELEMENTARY
21 - ORANGE ELEMENTARY
22 - ORANGE GROVE HIGH
23 - PARKRIDGE SCHOOL OF THE ARTS
24 - PRADO VIEW ELEMENTARY
25 - PROMENADE ELEMENTARY
26 - RENEY INTERMEDIATE
27 - SANTIAGO HIGH
28 - STALLINGS ELEMENTARY
29 - TEMESCAL VALLEY ELEMENTARY
30 - VICENTIA ELEMENTARY
31 - VICTRESS BOWER SCHOOL
32 - WASHINGTON ELEMENTARY
33 - WILSON ELEMENTARY
34 - YSMAEL VILLEGAS MIDDLE SCHOOL

*Source:*
*City of Corona 2017*

CORONA General Plan EIR

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PLACEWORKS

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### *Student Generation*

School districts project the number of students that will be generated by new residential development by using district-specific rates in order to plan for future facilities expansions or constructions. The generation rates used by CNUSD are reflected in Table 5.15-8, *Corona Norco Unified School District Student Generation Rates*.

Table 5.15-8 Corona Norco Unified School District Student Generation Rates

| | Student Generation Rate | |
|---|---|---|
| School Type | Single-Family Rate | Multifamily Rate[1] |
| ES | 0.3650 | 0.2712 |
| MS | 0.1136 | 0.0752 |
| HS | 0.2337 | 0.1615 |

Source: Vondriska 2018.
[1] Blended rate for single- and multifamily units.

## 5.15.3.2 THRESHOLDS OF SIGNIFICANCE

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

SS-1 Result in a substantial adverse physical impact associated with the provisions 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 school services.

## 5.15.3.3 RELEVANT GENERAL PLAN POLICIES

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential school facilities and services impacts as a result of implementation of the proposed project.

### Land Use Element

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)

- **LU-4.5** Manage the timing of development and allow development to occur only when public infrastructure and services needed to support that development are available, will be provided concurrently, or are committed to be provided within a reasonable time frame.

- **LU-9.10** Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.

- **LU-15.1** Accommodate existing schools, parks, government, fire and police facilities, utility, and institutional uses suited to serving the local needs of Corona residents and business in accordance with the land use plan's designations and applicable design and development policies.

- **LU-15.2** Allow for the development of new schools, parks, government, fire and police facilities, utility, and institutional uses in any location of the City, regardless of the land use plan's designation, provided the use is environmentally suitable and compatible with adjoining land uses, and adequate infrastructure can be provided.

- **LU-15.3** Promote collaborative and creative solutions between the public and private sectors to develop additional schools, parks, and other public facilities in the City and sphere of influence.

- **LU-22.2** Ensure that annexations to the City of Corona are consistent with the goals and policies of the general plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

- **LU-22.3** Require that existing and proposed development within proposed annexation areas generate sufficient tax or other revenue base to compensate for their fair share of community services that are provided by the City of Corona.

- **LU-22.4** Require that infrastructure and service improvements for proposed annexation areas do not create an undue burden on existing City of Corona infrastructure and services.

- **LU-22.5** Encourage that, if an area annexes to the City of Corona, a community facilities district or similar financing district shall be established to fund the provision and maintenance of sewers, streets, and other public improvements and services.

- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

### Parks, Recreation, Cultural Arts, and Education Element

#### *Educational Resources*

- **PR-3.7** Maintain active engagement with public and private schools, neighboring communities and cities, and other agencies to fully understand the area's evolving educational resources, issues, and opportunities.

- **PR-3.8** Partner with Corona-Norco Unified School District to further establish school facilities as community focal points where open spaces, multipurpose facilities, libraries, and other facilities are available for City programs/public use at specific times.

- **PR-3.9** Work with schools to establish safe sidewalks and bicycle paths that link public kindergarten through 12th-grade school sites with neighborhoods; work with schools to encourage use of nonmotorized transportation.

- **PR-3.10** Consult with Corona-Norco Unified School District and other local educational organizations to explore opportunities to obtain grants and other funds together.

### Housing Element

- **H-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

- **H-3.3** Provide public services and improvements that enhance and create neighborhood stability.

### Healthy Community

- **HC-1.5** Consider the potential impacts of decisions related to land use, food access, active living, safe and sanitary housing, public facilities and services, and other factors that may affect the health of Corona.

- **HC-5.1** Locate and distribute, where feasible, a generally equivalent type and amount of public facilities, services, and amenities (parks, schools, police and fire services, etc.) to all areas throughout Corona. Seek to improve facilities, services, and amenities in areas deemed deficient.

- **HC-5.2** Assess the development impact fees required for new developments as necessary to ensure that appropriate levels of public facilities, services, and amenities are provided and that the demand from such development does not detract from current areas.

- **HC-5.3** Where equivalent public facilities, services, and amenities are not available or feasible, encourage and/or require public transit providers to establish and maintain routes that allow access from underserved areas to appropriate public facilities, services, and amenities.

- **HC-5.4** Establish agreements with partner agencies to provide public facilities, services, and amenities within the city. This includes public education, health services, flood protection, energy, technology and communications services, and other services as appropriate.

### 5.15.3.4 ENVIRONMENTAL IMPACTS

**Impact 5.15-3: The proposed project would generate up to 7,579 additional students who would impact the school enrollment capacities of the Corona-Norco Unified School District and the Alvord Unified School District. [Threshold SS-1]**

#### General Plan

Development in accordance with the General Plan Update would allow for up to 11,511 additional homes and 11,034 additional households, resulting in an increase of 39,298 residents in the City of Corona and its SOI. The increase in residents would also lead to an increase in the City and SOI's student population, which is primarily served by CNUSD. There is one school in the City of Corona that is served by AUSD—Promenade Elementary School.

School districts project the number of students that will be generated by new residential development by using district-specific rates in order to plan for future facilities expansions or constructions (see Table 5.15-8). Table 5.15-9, *General Plan Update Buildout Student Generation*, estimates the number of students generated in the City and SOI at General Plan buildout.

**Table 5.15-9 General Plan Update Buildout Student Generation**

| School Type | New Students[1] | | | Current Enrollment[1] | Current Enrollment + New | Existing Capacity[1] | Remaining Capacity |
|---|---|---|---|---|---|---|---|
| | City | SOI | Total | | | | |
| ES | 1,800 | 2,117 | 3,917 | 16,120 | 20,037 | 28,633 | 8,596 |
| MS | 540 | 651 | 1,191 | 5,470 | 6,661 | 8,572 | 1,911 |
| HS | 1,126 | 1,345 | 2,471 | 10,121 | 12,592 | 12,814 | 222 |
| Total | 3,466 | 4,113 | 7,579 | 31,711 | 39,290 | 50,019 | 10,729 |

Source: Vondriska 2018.
Notes:
ES = Elementary Schools; MS=Middle School; HS=High School
SF = Single Family; MF = Multifamily
Existing and proposed residential units are based on Tables 3-1 and 3-4: City = 3,304 SF and 2,190 MF, SOI = 5,171 SF and 846 MF, Total = 8,475 SF and 3,036 MF.
[1] Based on the student generation rates and enrollment and capacity provided by the CNUSD.

As shown in Table 5.15-9, buildout of the General Plan Update would generate up to 3,917 elementary students, 1,191 middle school students, and 2,471 high school students in the City of Corona and SOI. The CNUSD would have adequate capacity for students generated by the proposed project; the remaining capacities would be able to accommodate 8,596 elementary students, 1,911 middle school students, and 222 high school students.

If and when CNUSD needs to expand and construct new facilities to accommodate the growth generated by buildout of the General Plan Update, funding for new schools would be obtained from the fee program pursuant to SB 50, and state and federal funding programs. Pursuant to Section 65996 of the Government Code, payment of school fees is deemed to provide full and complete school facilities mitigation. Additionally, funds from Measure U and Measure GG would be used by CNUSD to fund the construction of schools.

As confirmed by John Vondriska, Administrative Director, Facilities, CNUSD, schools within CNUSD would be able to accommodate the potential increase in enrollment through boundary adjustments and, if needed, the addition of portable classrooms (Vondriska 2018). At the General Plan level of analysis, it is speculative and infeasible to evaluate project-specific environmental impacts associated with the specific construction of future school facilities since specific sites and time frames for development are unknown. When specific projects are necessitated and subsequently undertaken to meet the growth demands from buildout of the proposed project, the appropriate level of analysis required under CEQA would be conducted by the CNUSD.

Furthermore, policies in the Parks, Recreation, Cultural Arts, and Education Element of the General Plan Update would ensure adequate school services:

- **PR-3.7** Maintain active engagement with public and private schools, neighboring communities and cities, and other agencies to fully understand the area's evolving educational resources, issues, and opportunities.

- **PR-3.8** Partner with Corona-Norco Unified School District to further establish school facilities as community focal points where open spaces, multipurpose facilities, libraries, and other facilities are available for City programs/public use at specific times.

- **PR-3.10** Consult with Corona-Norco Unified School District and other local educational organizations to explore opportunities to obtain grants and other funds together.

Thus, impacts on school services, would be less than significant, as a result of the General Plan Update implementation.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect school facilities or services in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to school services and facilities.

## 5.15.3.5 EXISTING REGULATIONS AND STANDARD CONDITIONS

### State

- California State Assembly Bill 2926: School Facilities Act of 1986
- California Government Code § 65995 (Senate Bill 50)

## 5.15.3.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.15-3.

#### 5.15.3.7 MITIGATION MEASURES

No significant adverse impacts were identified, and no mitigation measures are necessary.

#### 5.15.3.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures are required, and impacts would remain less than significant.

## 5.15.4 Library Services

### 5.15.4.1 ENVIRONMENTAL SETTING

#### Regulatory Framework

There are no federal or state regulations regarding library facilities or services.

##### *Corona Library Strategic Plan (2010-2013)*

The Corona Library has adopted a strategic plan (2010-2013) for the purpose of promoting lifelong learning. The Corona Library Strategic Plan sets forth the following goals:

- Patron Service. People of all ages and backgrounds will have the tools and skills to find, evaluate, and use information resources that best meet their needs.
- Collection. People of all ages and backgrounds will find a variety of materials in the languages they speak, read, or understand, to satisfy their personal reading interests and educational needs.
- Programs. People of all ages and backgrounds will find a variety of programs and activities to stimulate, enrich, and educate their lives.
- Building Environment. People of all ages and backgrounds will find a safe, welcoming, and accessible neighborhood space.
- Staffing and Safety. Provide staff and volunteers with tools and skills to perform their jobs at the highest level and in the safest way.
- Youth Advocacy. Babies and preschoolers will have access to a wide variety of early literacy programs and materials; school-age children and teens will have access to programs and materials.
- Literacy. Adults and families of all ages and backgrounds will have materials and programs to help them reach their personal literacy goals.

The Corona Library Strategic Plan includes goals for marketing the library, providing adequate funding for services, and ensuring the library remains an important and viable resource.

## Existing Conditions

### *Corona Public Library*

The Corona Public Library is located at 605 South Main Street, and is a 62,000-square-foot facility. The library has a total of 122,500 registered members, 38,500 of which are children. The library's collections consist of 152,500 items, including books, videos, CDs, CDROM software, audio cassettes, books on tape, and pamphlets. The Corona Public Library also contains 50 internet terminals; the total circulation for the 2016-2017 year was 878,683 items, which included electronic and print items (CPL 2017). The library contains the W.D. Addison Heritage Room which covers all periods of time, and includes photographs, rare books, newspapers, citrus labels, manuscripts, oral histories, artefacts, and other items available for the public to view. The two predominant functions of the library are as follows:

- Library Collection Services – provides research assistance to the public; maintains the Integrated Library System; evaluates, selects, and processes print and electronic materials; and supervises operations and patron use of extensive collections of local history resources and artifacts in the Heritage Room; and

- Account Services – oversees activities related to materials circulation, patron accounts, and passport services (Corona 2019b).

In the fiscal year 2018-2019, the existing library space was repurposed to create the Maker Exchange makerspace with funding from the Friends of the Corona Public Library and the Leela Project (Corona 2019b). In the fiscal years of 2019-2020 and 2020-2021, the expansion of the library's Smart Pass Program to private schools and to the Alvord School District, to convert student ID into Corona Public Library Cards, and create teacher cards for educators in local public and private schools is planned (Corona 2019b). Additionally, the projected average daily patrons, for the Fiscal Year of 2019-2020, is 1,287 patrons, and the total number of library items borrowed annually is estimated to be 380,000 items (Corona 2019b).

### *Funding for Library Facilities*

The City of Corona uses development impact fees from residential uses to fund library facilities within the City, as reflected in Table 5.15-10, *Library Facilities Development Impact Fees*. Funding for library services would also come from the City's General Funds.

**Table 5.15-10 Library Facilities Development Impact Fees**

| Estate – Residential | Single Family | Single Family – Attached | Multifamily[1] | Senior Restricted Attached[2] | Assisted Care Living[2] | Mobile Home |
|---|---|---|---|---|---|---|
| Per dwelling unit | | | | | | |
| $479 | $479 | $369 | $346 | $174 | $176 | $479 |

Source: Corona 2019a.
[1] Residential developments with densities greater than 8 DU per acre are considered Multifamily.
[2] Ordinance 2993, establishing fees for Senior Restricted Attached Units and Assisted Care Living Units.

### *Riverside County Library System*

The Riverside County Library System provides library services to the unincorporated communities within Corona's SOI. The branch library in Home Gardens is approximately 20,000 square feet and is located at 3785 South Neece Street, and the El Cerrito branch library is 10,000 square feet and is situated at 7581 Rudell Road. Temescal Valley is served by the El Cerrito branch library. Both the Home Gardens and El Cerrito branch libraries contain total collections of approximately 25,000 items, which include books, videos, CDs, CDROM software, audiocassettes, books on tape, and pamphlets. As Coronita does not have a branch library, the closest libraries to residents would be the Corona or Norco main libraries.

## 5.15.4.2 THRESHOLDS OF SIGNIFICANCE

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

LS-1 Result in a substantial adverse physical impact associated with the provisions 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 library services.

## 5.15.4.3 RELEVANT GENERAL PLAN POLICIES

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential library service impacts as a result of implementation of the proposed project.

### Land Use Element

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)

- **LU-4.5** Manage the timing of development and allow development to occur only when public infrastructure and services needed to support that development are available, will be provided concurrently, or are committed to be provided within a reasonable time frame.

- **LU-9.10** Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.

- **LU-15.1** Accommodate existing schools, parks, government, fire and police facilities, utility, and institutional uses suited to serving the local needs of Corona residents and business in accordance with the land use plan's designations and applicable design and development policies.

- **LU-15.2** Allow for the development of new schools, parks, government, fire and police facilities, utility, and institutional uses in any location of the City, regardless of the land use plan's designation, provided the

use is environmentally suitable and compatible with adjoining land uses, and adequate infrastructure can be provided.

- **LU-15.3** Promote collaborative and creative solutions between the public and private sectors to develop additional schools, parks, and other public facilities in the City and sphere of influence.

- **LU-22.2** Ensure that annexations to the City of Corona are consistent with the goals and policies of the general plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

- **LU-22.3** Require that existing and proposed development within proposed annexation areas generate sufficient tax or other revenue base to compensate for their fair share of community services that are provided by the City of Corona.

- **LU-22.4** Require that infrastructure and service improvements for proposed annexation areas do not create an undue burden on existing City of Corona infrastructure and services.

- **LU-22.5** Encourage that, if an area annexes to the City of Corona, a community facilities district or similar financing district shall be established to fund the provision and maintenance of sewers, streets, and other public improvements and services.

- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

## Parks, Recreation, Cultural Arts, and Education Element

### *Educational Resources*

- **PR-3.1** Provide access to information, technology, leisure services, and a range of innovative educational resources through the Corona Public Library system.

- **PR-3.2** Continue to promote the Corona Public Library as a community centerpiece; maintain and expand collections and programs that celebrate local history and culture.

- **PR-3.4** Include and solicit input and participation of the community in assessments of the Corona Public Library collection and programs to increase library patronage and effectiveness.

- **PR-3.5** Facilitate collaboration among community groups, educational institutions, and the Corona Public Library to enhance sharing of information and resources in support of library services.

- **PR-3.6** Support the Corona Public Library, where economically feasible, in its efforts to modernize and provide adequate and equitably distributed library services, facilities, and programs that meet the needs of all residents.

- **PR-3.8** Partner with Corona-Norco Unified School District to further establish school facilities as community focal points where open spaces, multipurpose facilities, libraries, and other facilities are available for City programs/public use at specific times**.**

### Housing Element

- **H-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

- **H-3.3** Provide public services and improvements that enhance and create neighborhood stability.

### Healthy Community

- **HC-1.5** Consider the potential impacts of decisions related to land use, food access, active living, safe and sanitary housing, public facilities and services, and other factors that may affect the health of Corona.

- **HC-5.1** Locate and distribute, where feasible, a generally equivalent type and amount of public facilities, services, and amenities (parks, schools, police and fire services, etc.) to all areas throughout Corona. Seek to improve facilities, services, and amenities in areas deemed deficient.

- **HC-5.2** Assess the development impact fees required for new developments as necessary to ensure that appropriate levels of public facilities, services, and amenities are provided and that the demand from such development does not detract from current areas.

- **HC-5.3** Where equivalent public facilities, services, and amenities are not available or feasible, encourage and/or require public transit providers to establish and maintain routes that allow access from underserved areas to appropriate public facilities, services, and amenities.

- **HC-5.4** Establish agreements with partner agencies to provide public facilities, services, and amenities within the city. This includes public education, health services, flood protection, energy, technology and communications services, and other services as appropriate.

## 5.15.4.4 ENVIRONMENTAL IMPACTS

**Impact 5.15-4: The proposed project would allow for up to 39,298 residents in the General Plan Update area, increasing the service needs for the Corona Public Library, Home Gardens Branch Library, and El Cerrito Branch Library. [Threshold LS-1]**

The proposed project would allow development of up to 11,511 new homes, resulting in up to 39,298 new residents in the City and SOI.

## General Plan

The American Library Association does not have standards for facility size and circulation, but rather, supports local benchmarks. The California Library Association FY2015 surveys indicate that the median library was 0.45 sf/capita in size. Corona provides 0.38 sf/capita. Using benchmarks against city and county libraries across California, Corona would need to acquire 12,500 sf to meet the median benchmark. If Corona is benchmarked to the standards of Riverside County, 0.5 sf/capita, an additional 20,000 sf is needed. These figures are equivalent to two branch outlet libraries. Although the General Plan Update would result in up to 39,298 additional residents, this does not necessarily mean that there would be a significant demand for more library collection items or facility space. The General Plan Update addresses library facilities fees to ensure that adequate facilities and resources are continually available to the City's growing population. Funding for library services comes primarily from the City of Corona's General Fund and development impact fees, as well as library fines and fees collected from patrons, and state, federal, or government aid. As development occurs, the General Fund should grow proportionally with the property tax collections. Additionally, access to online resources, including eBooks and audiobooks, are available on the Corona Public Library and Riverside County Library System.

Furthermore, policies in the Parks, Recreation, Cultural Arts, and Education Element of the General Plan Update would ensure adequate library services:

- **PR-3.1** Provide access to information, technology, leisure services, and a range of innovative educational resources through the Corona Public Library system.
- **PR-3.2** Continue to promote the Corona Public Library as a community centerpiece; maintain and expand collections and programs that celebrate local history and culture.
- **PR-3.3** Support ongoing and long-term partnerships that help all community members reach an appropriate level of literacy, math, writing, critical thinking, and computer training.
- **PR-3.4** Include and solicit input and participation of the community in assessments of the Corona Public Library collection and programs to increase library patronage and effectiveness.
- **PR-3.5** Facilitate collaboration among community groups, educational institutions, and the Corona Public Library to enhance sharing of information and resources in support of library services.

Therefore, impacts to library services would be less than significant.

## Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect library facilities or services in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts to library services and facilities.

### 5.15.4.5 EXISTING REGULATIONS AND STANDARD CONDITIONS

No existing regulations or standard conditions apply to library services.

### 5.15.4.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.15-4.

### 5.15.4.7 MITIGATION MEASURES

No significant adverse impacts were identified, and no mitigation measures are necessary.

### 5.15.4.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures are required, and impacts would remain less than significant.

## 5.15.5 References

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# 5.16 RECREATION

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Corona General Plan Technical Update to impact public parks and recreational facilities in the City and its sphere of influence (SOI). Cumulative impacts related to recreation would be within the City and SOI boundary.

## 5.16.1 Environmental Setting

### 5.16.1.1 REGULATORY FRAMEWORK

#### State Regulations

##### *Quimby Act*

The Quimby Act was established by the California Legislature in 1965 to provide parks for the growing communities in California. The act authorizes cities to adopt ordinances addressing parkland and/or fees for residential subdivisions for the purpose of providing and preserving open space and recreational facilities and improvements, and requires the provision of three acres of park area per 1,000 persons residing within a subdivision, unless the amount of existing neighborhood and community park area exceeds that limit, in which case the city may adopt a higher standard not to exceed five acres per 1,000 residents. The Quimby Act also specifies acceptable uses and expenditures of such funds

##### *Mitigation Fee Act*

The California Mitigation Fee Act (Government Code §§ 66000 et seq.) allows cities to establish fees that will be imposed upon development projects for the purpose of mitigating the impact that the development projects have upon city's ability to provide specified public facilities. In order to comply with the Mitigation Fee Act, the City must follow four primary requirements: 1) Make certain determinations regarding the purpose and use of a fee and establish a nexus or connection between a development project or class of project and the public improvement being financed with the fee; 2) Segregate fee revenue from the General Fund in order to avoid commingling of capital facilities fees and general funds; 3) Make findings each fiscal year describing the continuing need for fees that have been in the possession of the City for five years or more and that have not been spent or committed to a project; and 4) Refund any fees with interest for developer deposits for which the findings noted above cannot be made.

##### *California Public Park Preservation Act*

The primary instrument for protecting and preserving parkland is California's Public Park Preservation Act of 1971. Under the Public Resource Code, cities and counties may not acquire any real property that is in use as a public park for any nonpark use unless compensation, land, or both are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

## Local Regulations

### *City of Corona Municipal Code*

#### *Quimby Act Fees*

The City's Quimby Act is codified in Chapter 16.35, Park Dedication and In-Lieu Fees, in the City's Municipal Code. As a condition of approval of a tentative or final tract map or parcel map for a residential subdivision, or for a building permit within a subdivision, the subdivider is required to dedicate park land and/or pay an in lieu fee. Recreational facilities provided by a project must be provided in accordance with the standards, specifications and requirements of the City's General Plan, the City's Park Master Plan, and any other adopted resolution, policy, or standard of the City. The City's park standard is based on a ratio of 3.0 acres of park area per 1,000 persons. At the time of filing a tentative map application for all subdivisions with residential land uses, project applicants may indicate whether they desire to dedicate property for park and recreational purposes onsite or whether they desire to pay a fee in lieu thereof. If they desire to dedicate land, they must designate the area on a tentative map.

#### *Development Impact Fees*

The City of Corona Municipal Code, Chapter 16.23, Development Impact Fees, also provides for the means to finance adequate infrastructure and other public improvements and facilities made necessary by the impacts created by new residential (i.e., beyond just demand created by subdivisions) and non-residential development in the City. To maintain the current level of service for parks in the City, Chapter 16.24, Improvement Requirements, requires payment of development impact fees (DIF) for recreational facilities to assure the acquisition and improvement of adequate recreation facilities to serve the subsequently annexed areas. Sections 16.24.170 through 16.24.200 of the City's Municipal Code apply to the construction of new dwelling units and to additions or improvements to existing units if such improvements or additions increase habitable living space by 25 percent. Additionally, Chapter 16.25, South Corona Development Fees and Credits, identifies DIF fees specific to development in the South Corona Community Facilities Plan. Table 5.16-1, *Recreational Facility Development Impact Fees,* identifies the applicable DIF to fund the creation of new recreational facilities in the City of Corona.

Table 5.16-1 Recreational Facility Development Impact Fees

| Infrastructure Category/Area | Estate – Residential | Single Family | Single Family – Attached | Multi-family[1] | Senior[2] | Assisted Living[2] | Mobile Home | Lodging | Com-mercial | Indus trial / Manufac turing |
|---|---|---|---|---|---|---|---|---|---|---|
| | Per Dwelling Unit | | | | | | | Per Room | Per Square Foot | |
| Quimby Fees | $12,708 | $12,708 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| Aquatic Center Facilities | $192 | $192 | $135 | $135 | $48 | $48 | $120 | $0.00 | $0.00 | $0.00 |
| Parkland and Open Space | $12,708 | $12,708 | $8,924 | $8,924 | $4,130 | $0.00 | $7,884 | $160 | $0.09 | $0.37 |

Source: Corona 2019.
1 Residential developments with densities greater than 8 DU per acre are considered Multifamily.
2 Ordinance 2993, establishing fees for Senior Restricted Attached Units and Assisted Care Living Units.

### 5.16.1.2 EXISTING CONDITIONS

The City of Corona and its SOI include open space areas, natural trails, parklands, and recreational programs that serve the residents of Corona and the surrounding communities.

#### Natural Areas

The City of Corona's location near the convergence of three counties allows for residents to access natural open space areas, including mountains, hillsides, canyons, and preserves.

##### *Prado Dam Basin*

The Prado Dam Basin is at the confluence of the Santa Ana River, Cucamonga Creek, Chino Creek, and Temescal Wash. The US Army Corps of Engineers administers the land for recreation purposes, riparian habitat, and flood control facilities. Recreational activities include sightseeing, birdwatching, hiking, walking, and bicycling. The Prado Basin also connects to the Santa Ana River Wildlife Area in Riverside County, which offers additional recreational opportunities, such as hiking and equestrian trails.

##### *Chino Hills State Park*

Chino Hills State Park is a 14,100-acre preserve that stretches from San Bernardino County through parts of Orange County. Although it is not directly within the City of Corona, Chino Hills State Park is adjacent to the City and provides recreational opportunities. Chino Hills State Park has over 90 miles of trails for hiking, biking, and equestrian uses, and facilities for camping. The park is also a key wildlife corridor extending south from the Puente Hills along the City of Corona's western border to the Cleveland National Forest.

##### *Cleveland National Forest*

The Cleveland National Forest is the southernmost National Forest in California, located on the western front of the City of Corona's SOI. The Forest consists of 460,000 acres that offers a variety of terrains and recreational opportunities. The Trabuco Ranger District operates out of the Corona office located at 1147 East Sixth Street. The Trabuco District manages approximately 139,000 acres in Orange and Riverside Counties and offers a multitude of trails for hiking, biking, horseback riding, and remote camping for those seeking an alternative to developed campgrounds.

##### *Local Natural Areas*

The City of Corona benefits from several local natural areas in the community. The Sage Open Space and Fresno Canyon offer 67 acres of open space for walking, hiking, and bicycling. Master plans have not been created for these local open space assets. The City also encompasses washes and channels that offer potential connections to parks and opportunities for hiking, biking, and pedestrian activity. These include Wardlow Wash, Oak Street Channel, Main Street Channel, and Temescal Wash. The Santa Ana River in the Prado Dam area also connects to a regional trail system.

In addition to these established open space areas, the City of Corona is part of the Riverside County Multi-Species Habitat Conservation Plan. Thus, several areas, such as washes, canyons, or other open space areas,

may be proposed for potential conservation and recreational use. Figure 5.16-1, *Natural Open Spaces*, shows the locations of these open space areas within the City and SOI.

## Built and Natural Trails

Trails are a valued asset for many residents of the City of Corona who enjoy hiking, bicycling, and walking in the natural areas within and surrounding the community. The General Plan has established the following general classes of trails:

### *Urban Trails*

Urban trails are multipurpose, hard surface, pedestrian, and cycling routes that physically connect residential areas, parks, schools, commercial nodes, and employment centers. There is no inventory of urban trails developed for Corona.

### *Historic Trails*

Historic trails are intended as scenic walkways throughout older residential neighborhoods and downtowns to promote appreciation of the City's heritage. In 2013, the City began exploring opportunities for a multiuse trail following the historic Butterfield Overland Stage route along the Temescal Wash, which would be one segment of a national historic trail that dates to stagecoach service in the 1850s.

### *Rural Trails*

Rural and natural trails are defined as multi-purpose routes for hikers, bicyclists, and horseback riding that run along washes, railroad rights-of-way, or unimproved open space areas. Examples of these trails in the City of Corona include the proposed Santa Ana River Trail, which begins in San Bernardino County and continues along the Santa Ana River to Orange County. Natural trails include Coal Canyon, Skyline Drive, Tin Mine Canyon, Indian Truck Trail, El Cariso-Trabuco Peak, the North Main Divide Road, and so forth.

## Developed Parks

Corona has 35 public parks covering about 352 acres, exclusive of natural open space areas (Fresno Canyon, Sage Open Space, and other similar areas). This total includes the El Cerrito Sports Park in the City's SOI, because it is a joint use facility with Riverside County that serves Corona residents. The public park system includes mini, neighborhood, community and major/regional parks that are differentiated by scale, population served, and amenities. In addition to developed parkland, the Sage Open Space and Fresno Canyon areas offer 67 acres of open space for walking, hiking, and bicycling. Additional recreational facilities may also be available as part of homeowner associations.

### *Mini Parks*

Mini parks are the smallest parks and are generally less than two acres. They provide passive open space and buffering from adjacent urban land uses. Park uses include sitting areas, play structures, walking trails, landscaping, rest areas, vista points, picnic areas, and so on. The service area of mini parks is less than a quarter of a mile radius.

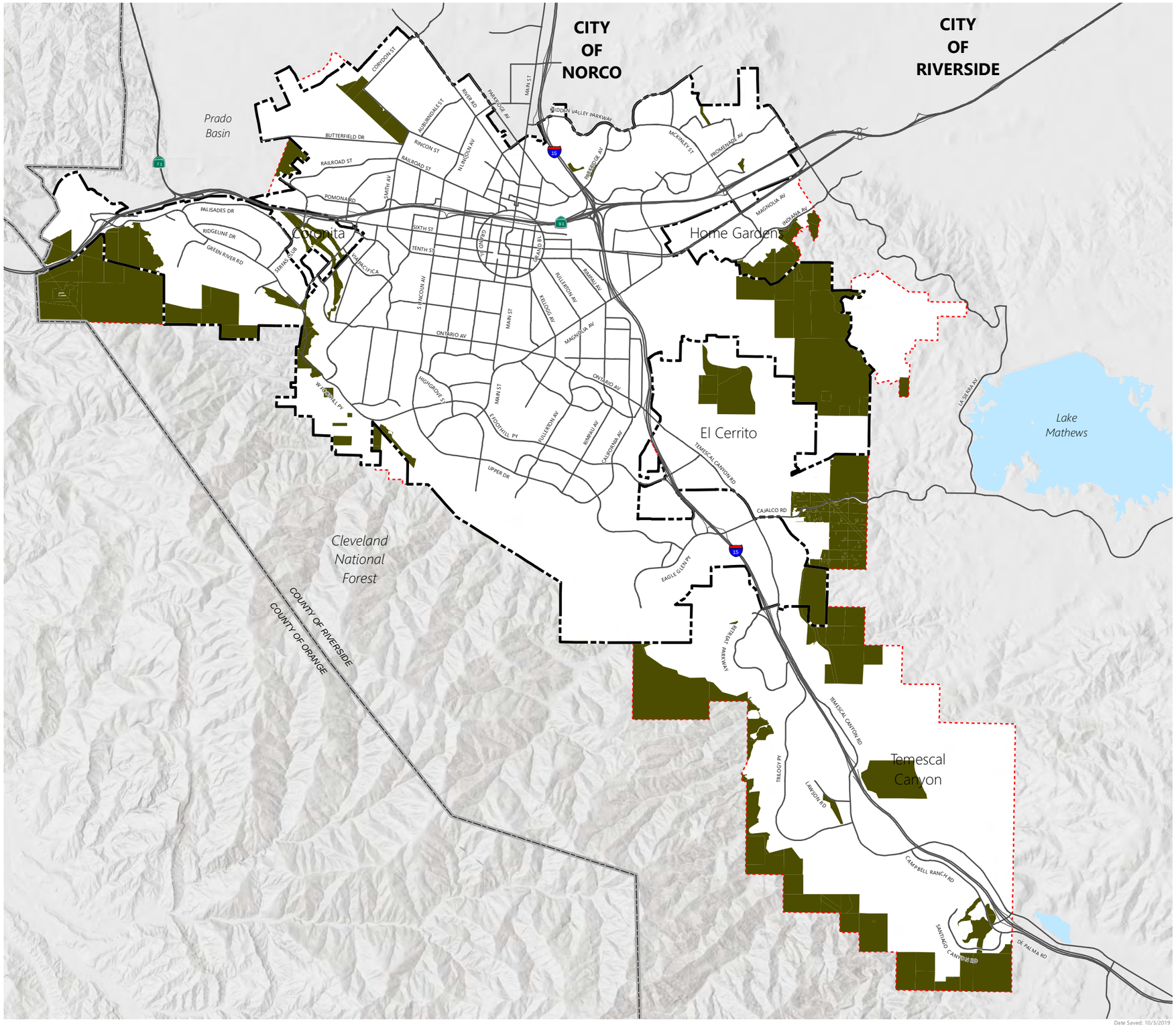


Figure 5.16-1

# NATURAL OPEN SPACE

## Legend

- City Boundary
- Sphere of Influence Areas
- Natural Open Space

*Source:*
*PlaceWorks, City of Corona 2019*

CORONA
General Plan
EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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### *Neighborhood Parks*

Neighborhood parks are generally between 5 and 20 acres and are intended to serve the recreational needs of a population of 5,000. Uses can include playing courts, playing fields, sitting areas, picnic areas, restrooms, walking trails, landscaping, and parking. The service area is up to a one-half-mile radius. The City's 24 neighborhood parks encompass 141 acres of parkland.

### *Community Parks*

Community parks are 20 to 40 acres and are intended to serve the recreational needs of several neighborhoods. They can include passive and active recreation facilities or structured facilities (e.g. pools, gymnasiums, or community centers). Community parks are intended to have a service area of a 1- to 1.5-mile radius. The City's five community parks encompass approximately 90 acres.

### *Major Parks*

Major (regional) parks are approximately 40 acres or larger, but may be less, and are intended to serve the broadest range of active and passive recreational needs as well as indoor and outdoor recreational needs citywide or regionally. Uses can include auditoriums, gymnasiums, recreation centers, organized sports fields, and playing courts. Currently, the City of Corona has two major parks that total 91 acres – Butterfield Park, which is 43-acres, and Santana Regional Park, which is 47-acres.

### *Special Use Parks*

Special use parks include parks and other City facilities that accommodate specialized recreational needs, such as dog parks or sports fields, or reflect important community values, such as a nature center or a heritage museum. Because of the specialized services, there is no established service area associated with a special use park. Examples of special use parks include the El Cerrito Sports Park, a regional sports park facility, and City Park, which contains a pool.

### *Private Parks*

Although not a park type listed in the General Plan, Corona has a few private parks in gated communities or neighborhoods, where the residents or HOA pay for park maintenance. There are no specific standards in acreage and amenities for private parks; the facility is determined pursuant to residential development standards or a development agreement approved by the City and respective developer.

### *Golf Courses*

Golfing is a popular activity, both recreationally and professionally, in the community. The City of Corona does not have a public golf course maintained by the City. However, Corona has six private or fee-for-service golf courses. These golf courses offer views of the surrounding topography and provide additional recreational amenities. Eighteen-hole golf courses in the City of Corona and SOI include:

- Green River Golf Club, an 18-hole golf course in northern Corona

- Cresta Verde Golf Course, an 18-hole golf course in northern Corona
- Eagle Glen Golf Club, an 18-hole golf course in southern Corona
- Dos Lagos Golf Course, an 18-hole golf course in southern Corona
- Champions Club, an 18-hole golf course at the Retreat in Temescal Valley
- Glen Ivy Golf Club, an 18-hole course in Temescal Valley

The City of Corona General Plan has an established land use designation—Open Space Recreation—to accommodate golf courses. As of 2017, golf courses cover 922 acres in the City of Corona and 516 acres in the SOI. These figures do not account for the closed golf course in Coronita, which now serves as a natural open space. Since golf course facilities are not maintained by the City of Corona and are private fee-based facilities, the golf courses are not counted toward satisfying the City's Quimby requirement of 3 acres of parkland per 1,000 residents. Figure 5.16-2, *Recreation and Park Facilities,* shows the locations of the various park types and golf courses within the City and SOI.

### *Sphere of Influence*

Further, there is a total of 69.95 acres of parkland within the SOI:

- El Cerrito
  - El Cerrito Sports Park, 26.48 acres
- Home Gardens
  - Park and Basketball Court, 0.51 acre
- Temescal Canyon
  - Deleo Skatepark and Sports Fields, 24.89 acres
  - Montecito Ranch Park, 5.31 acres
  - Sycamore Creek Sports Park, 7.46 acres
  - Wildrose Ranch Community Park, 5.30 acres

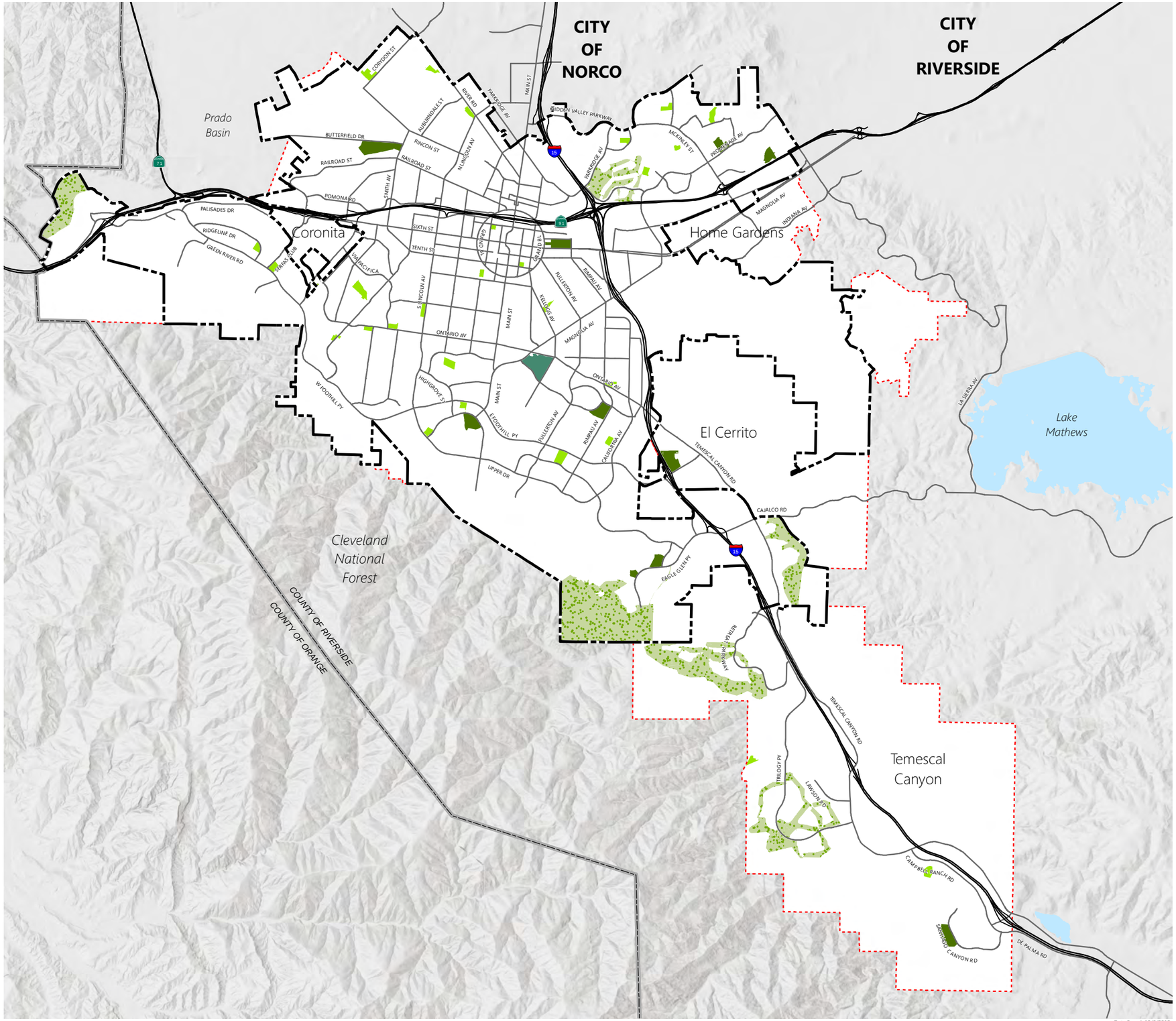
## Recreation Facilities

The Circle City Center is one of the main community centers, located at 365 North Main in the City of Corona. The facility includes a gymnasium/event hall, a fitness room, a game room, classrooms and meeting rooms, a banquet room, and a catering kitchen.

The Senior Center offers an opportunity for adults 50 years of age and older to develop an extended family through a wide range of health and educational programs, human services, recreational and social activities, and special events throughout the year.

Figure 5.16-2

# RECREATION AND PARK FACILITIES




## Legend

- City Boundary
- Sphere of Influence Areas
- Golf Courses
- Mini Park
- Neighborhood Park
- Community Park
- Major Park

*Source:*
*Corona 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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### *Recreational Programs*

The Library and Recreation Services Department is charged with providing community services and recreational and leisure time opportunities. This includes adult and youth sports, special events, childcare, after-school programs, summer programs, aquatic programs, community classes, community involvement programs, senior recreation programs, and reservations for facilities. An abbreviated list of the types of recreation programs and services offered in the City of Corona are as follows:

- **Kids Club:** The City of Corona offers after-school children's activities at 10 public schools for grades kindergarten through sixth. Activities include group games and crafts. A teen zone is also offered at Cesar Chavez Academy for seventh and eighth graders.

- **Aquatics:** This includes swimming lessons, adaptive swim lessons, junior lifeguard program, and recreational swimming. Lessons are available for children 6 months and older to adults. Private clubs also offer swimming lessons and activities.

- **Youth Sports:** The City offers basketball, indoor soccer/futsal, and flag football for youth ages 3 to 14 years. Private organizations offer baseball, football, softball, soccer, swimming track, tennis, basketball, and other active sports for youth.

- **Adults:** City adult sports include Adult Basketball and Adult Softball Leagues. Other activities such as tennis, martial arts, golfing, ballet/dance, and calisthenics are offered through the City's contract classes program. Passive recreation programs are also offered for adults.

- **Senior Activities:** City senior activities include a range of passive and active recreation, including lectures, legal services, special events, travel programs, and movie matinees. Exercise classes offer yoga, dance, and many other activities held primarily at the senior center.

- **Adaptive Recreation:** The City offers a tailored menu of social, recreational, educational, and creative activities for residents with disabilities. Activities include special events, yoga, art classes, story time and exercise among others. The City also offers its weekly Out-of-Bounds program for disabled residents.

### Joint-Use Facilities

Local public schools in Corona also offer additional active recreational facilities for public use after school hours. The City of Corona and the Corona-Norco Unified School District maintain formal public use agreements for several school facilities. Joint-use agreements allow for shared public use of school grounds and facilities after school hours and on weekends, which benefits the community by expanding the availability of recreational spaces for residents. In other cases, the City's parks and recreational facilities are also available for shared use by community groups. These allow groups meeting space for a variety of passive and active uses

## 5.16.2 Thresholds of Significance

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

R-1 Would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

R-2 Includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

## 5.16.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential recreation impacts as a result of implementation of the proposed project.

### Land Use Element

#### *Type, Distribution, and Form of Land Uses*

- **LU-1.1** Accommodate uses that support the diverse needs of Corona's residents, including opportunities for living, commerce, employment, recreation, education, culture, entertainment, civic engagement, and social and spiritual activity that are in balance with natural open spaces.

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.).

- **LU-1.5** Accommodate land use development in balance with the preservation and conservation of open spaces for recreation, aesthetic relief, natural resource value, and public safety (such as floodways, seismic fault zones, and other).

- **LU-2.8** Integrate a complementary mix of open spaces (including parks, trails, and landscaping) within the City's existing urban fabric to enhance character, soften hardscapes, beautify the community, and create a high quality of life.

#### *Community Quality and Sense of Place*

- **LU-5.5** Enhance Corona's system of parks, greenways, and open spaces by linking these and surrounding natural areas, including along the Temescal Creek, with pedestrian trails and greenways where feasible.

- **LU-5.13** Require that new master-planned residential subdivisions incorporate parks, greenways, and open spaces as character-defining amenities for their residents, emphasizing the retention of natural landforms and important plant communities.

#### *Residential Neighborhoods*

- **LU-7.8** Require that new multi-family residential projects be designed to convey a high level of visual and physical quality and distinctive neighborhood character in consideration of the following principles:

- Architectural treatment of building elevations and modulation of mass to convey the character of separate units, avoiding the sense of a singular building mass.
- Design of parking areas integral with the architecture of the residential portions of the structure, including its style, materials, colors, and forms.
- Incorporation of usable and functional private open space for each residential unit
- Incorporation of common open space that creates a pleasant living environment while providing attractive locations for recreation.

- **LU-9.1** Accommodate the development of new residential neighborhoods in areas depicted by the land use plan and growth and development policy plan that contain a diversity of housing and supporting schools, parks, and other amenities.
- **LU-9.6** Support the development of public uses that offer the opportunity for the sharing of facilities such as the integration of school play fields and athletic fields with public parks, public and school libraries, and multi-purpose facilities.
- **LU-9.10** Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.

### *Mixed-Use Districts*

- **LU-13.3** Require that adequate open space and, for larger projects, recreational facilities be incorporated into mixed-use development projects to meet the need of their residents and improve overall aesthetics.

### *Public and Institutional Uses*

- **LU-15.1** Accommodate existing schools, parks, government, fire and police facilities, utility, and institutional uses suited to serving the local needs of Corona residents and business in accordance with the land use plan's designations and applicable design and development policies.
- **LU-15.2** Allow for the development of new schools, parks, government, fire and police facilities, utility, and institutional uses in any location of the City, regardless of the land use plan's designation, provided the use is environmentally suitable and compatible with adjoining land uses, and adequate infrastructure can be provided.
- **LU-15.3** Promote collaborative and creative solutions between the public and private sectors to develop additional schools, parks, and other public facilities in the City and sphere of influence.
- **LU-15.4** Ensure that the City's public buildings, sites, and infrastructure are designed to be compatible in scale, mass, character, and architecture with the district and neighborhood in which they are located and pertinent design and development characteristics specified by this plan.

- **LU-15.5** Encourage non-City public agencies to design their structures and improvements to achieve a high level of visual and architectural quality and complement adjoining uses.

- **LU-15.6** Promote the consolidation of public uses in new residential communities—for example, the integration of parklands, schools, libraries, and community meeting facilities to enable them to serve as a centerpiece of community identity, as well as to maximize the efficient use of land.

- **LU-15.7** Strive to incorporate best practices in sustainability (including water conservation, energy conservation, groundwater filtration, and other similar techniques) into the design and development of public and institutional buildings.

### *Open Spaces*

- **LU-16.1** Accommodate open spaces that can be used for recreation and conserved to protect significant plant and animal habitats and population from the risks of flood, fire, and seismic hazards in accordance with the designations of the land use plan.

- **LU-16.2** Require the dedication of additional open spaces in new residential subdivisions and other applicable development, where necessary, to preserve the natural topography, plant and animal habitats, and flooding and drainage corridors in accordance with subsequent policies of this plan.

- **LU-16.6** As a requirement for new development, ensure the financing, planning, design, and construction of parkland as required by the Quimby Ordinance, community needs, and consistent with the parks, recreation, and education element.

### *Sphere of Influence*

- **LU-22.2** Ensure that annexations to the City of Corona are consistent with the goals and policies of the general plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

- **LU-22.3** Require that existing and proposed development within proposed annexation areas generate sufficient tax or other revenue base to compensate for their fair share of community services that are provided by the City of Corona.

- **LU-22.4** Require that infrastructure and service improvements for proposed annexation areas do not create an undue burden on existing City of Corona infrastructure and services.

- **LU-22.5** Encourage that, if an area annexes to the City of Corona, a community facilities district or similar financing district shall be established to fund the provision and maintenance of sewers, streets, and other public improvements and services.

- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

## Community Design Element

### *Trails and Greenways*

- **CD-4.1** Develop a plan and implement improvements that visually and physically interconnect the City's parklands and link these and residential neighborhoods with the Cleveland National Forest, and other open spaces. This may be accomplished by the installation of a continuous corridor of trees, plantings, informational signage, trails, and/or other defining elements along streets that connect the parks and open spaces or new corridors, where feasible.

- **CD-4.2** New development adjoining open spaces, washes or have the ability to provide pedestrian connections to off-site trails or pathways should be designed to ensure landscape transitions and compatibility with these resources. Such improvements should be designed to provide adequate flood protection for adjoining properties.

## Parks, Recreation, Cultural Arts, and Education Element

### *Parks and Open Space*

- **PR-1.1** Seek all creative means to facilitate the provision of at least three acres for every 1,000 residents of useable, attractive, well-maintained, and amenity-appropriate parkland.

- **PR-1.2** Provide a variety of park types (e.g., neighborhood, community, major, and special user) with an appropriate mix of amenities that are designed for accessibility and use to meet the diverse needs of residents.

- **PR-1.3** Encourage distribution of parks, open space, and recreational amenities throughout the City, to the extent feasible, to maximize convenient access for residents, primarily, and secondarily to the business community.

- **PR-1.4** Strengthen partnerships and collaborations with the Corona-Norco and Alvord school districts and other community organizations to increase the shared use of facilities for the effective delivery of services and programs.

- **PR-1.5** Operate and maintain park and recreational facilities to facilitate a high-quality experience; regularly modernize parks and associated facilities where needed, incorporating best practices in sustainable designs.

- **PR-1.6** Enhance the safety of parks and associated facilities through crime design, age-appropriate playgrounds, crime prevention technology, patrols, and community volunteer efforts.

- **PR-1.7** Seek feasible alternatives to raise sufficient funds to finance regular maintenance repairs and modernization of existing public parks as well as the development of new parks.

- **PR-1.8** Enhance options to access parks, community centers, and other recreational facilities through transit, bikeways, and walking paths that are useable for people of all ages and abilities.
- **PR-1.9** Increase stewardship and volunteerism opportunities for Corona youth, adults, schools, and community organizations to participate in parks and recreation events, projects, and programs.
- **PR-1.10** Provide opportunities for creative expression (e.g., public art, signage, pavement design, etc.) to improve the beauty of parks and to celebrate local history, culture, and values.
- **PR-2.1** Provide recreational and educational services, programs, and activities that are responsive to the interests of the community; adjust services to reflect trends and needs.
- **PR-2.2** Provide state-of-the-art community recreational and other facilities that support existing programs, accommodate emerging needs, and are accessible to all members of the community.
- **PR-2.3** Provide and improve childcare and after-school programs for children and youth; coordinate with school districts and other organizations to maximize participation and funding opportunities.
- **PR-2.4** Provide and support senior programs and seek opportunities to expand, where feasible, programs promoting health, lifelong learning, recreation, arts, and culture for Corona's older adults.
- **PR-2.5** Incorporate a range of program innovations, when financially feasible, to increase the type and range of programs that are adaptive and inclusive of people with disabilities.
- **PR-2.6** Collaborate with community organizations to plan and host a variety of special events and programs, such as music festivals, seasonal celebrations, and cultural activities.
- **PR-2.7** Ensure recreational service fees, to the extent feasible and appropriate, and balance the need to recover costs while offering opportunities for residents to participate regardless of income.
- **PR-2.8** Partner with the community, nonprofits, schools, and other organizations to provide a wide range of recreation, educational, and wellness programs that foster a healthy lifestyle in Corona.
- **PR-2.9** Explore affordable strategies for expanding access to City programs and active recreational programs such as shared use of libraries, public and private schools, community centers, and senior centers.

### *Multi-Use Trails*

- **PR-6.1** Strive to identify and connect multipurpose trails to schools, local and regional parks, residential neighborhoods, open space areas, downtown, bikeways, and other community destinations in Corona.
- **PR-6.2** Require new developments to provide access opportunities to trails that exist in their area or to proposed trails linking parks, recreational areas, neighborhoods, and other areas of high public

concentration with a trail design suitable to the area or contribute improvements, dedications, or fees to extend trails.

- **PR-6.3** Encourage creation of a multipurpose trail system for hiking, biking, and equestrian use in areas commonly used for these purposes, such as along washes, creeks, drainages, hillsides, parks, and other public use areas.

- **PR-6.4** Cooperate with Riverside County in establishing and completing portions of the county's backbone trail system that crosses Corona.

- **PR-6.5** Ensure trails that navigate through residential neighborhoods are not obtrusive, invade the privacy of residents, or jeopardize the safety of neighborhoods.

- **PR-6.6** Locate, design, and regulate the use of multipurpose trails so that they reflect the character and environment where they are located and do not negatively impact natural habitat, wildlife, landforms, or cultural resources.

- **PR-6.7** Initiate and maintain dialogue with federal, state, and local governments to coordinate access and maintenance of trails that cross jurisdictional boundaries.

- **PR-6.8** Promote the safe use of trails and require infrastructure and other public rights-of-way to be designed and developed to accommodate trails in a manner that is safe and compatible with the intended primary use of the rights-of-way or easement, where feasible.

- **PR-6.9** Seek available funding for the maintenance and/or establishment of multi-use trails that accommodate bicycle and pedestrian users.

- **PR-6.10** Consider numerous outlets to make the city's Trails Master Inventory or Trails Master Plan and bicycle plan easily accessible to the public to increase public awareness.

- **PR-6.11** Promote the use of trails and bicycle routes through use of wayfinding signs or placards.

- **PR-6.12** Raise public awareness of the health benefits of walking and bicycling, the safe use of the streets and sidewalks, and the availability of trails, bicycle routes, and greenways.

- **PR-6.13** Encourage the establishment of various trail classifications in the City that are suited to the environmental context on which they are located and the intended purpose and use of the trail.

- **PR-6.14** Consider establishment of trail heads and/or staging areas with parking for newly created trails, to the extent feasible; and if the opportunity arises, incorporate trail heads and/or staging areas into existing trail areas.

## Housing Element

### *Housing Production*

- **H-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

### *Neighborhood Quality*

- **H-3.3** Provide public services and improvements that enhance and create neighborhood stability.

## Healthy Community

### *Civic Engagement*

- **HC-1.5** Consider the potential impacts of decisions related to land use, food access, active living, safe and sanitary housing, public facilities and services, and other factors that may affect the health of Corona.

### *Public Facilities*

- **HC-5.1** Locate and distribute, where feasible, a generally equivalent type and amount of public facilities, services, and amenities (parks, schools, police and fire services, etc.) to all areas throughout Corona. Seek to improve facilities, services, and amenities in areas deemed deficient.

- **HC-5.2** Assess the development impact fees required for new developments as necessary to ensure that appropriate levels of public facilities, services, and amenities are provided and that the demand from such development does not detract from current areas.

- **HC-5.3** Where equivalent public facilities, services, and amenities are not available or feasible, encourage and/or require public transit providers to establish and maintain routes that allow access from underserved areas to appropriate public facilities, services, and amenities.

- **HC-5.4** Establish agreements with partner agencies to provide public facilities, services, and amenities within the city. This includes public education, health services, flood protection, energy, technology and communications services, and other services as appropriate.

### *Promoting Physical Activity*

- **HC-6.1** Ensure that parks, open space, and recreation facilities are accessible, to the extent feasible and appropriate, and allow residents of different neighborhoods to access them; prioritize new facilities in areas of Corona that are deficient in such amenities.

- **HC-6.2** Partner with local school districts and nonprofit organizations to improve access to parks and recreational facilities through access to school grounds and other facilities for use after school hours; prioritize agreements for services in areas of Corona that are deficient.

- **HC-6.3** Work with the two school districts in the city to ensure that all schools have safe and walkable routes to school, thus encouraging children to be more physically active.

- **HC-6.4** Prioritize the development and maintenance of safe walking and bicycling routes throughout the city to encourage residents to be physically active; prioritize areas deficient in coverage or that require safety improvements.

- **HC-6.5** Identify and eliminate, where feasible, barriers to outdoor physical activity, such as damaged, incomplete, blocked, or littered sidewalks and bike paths; lack of safe street crossings and direct connections; speeding; insufficient lighting; crime; and lack of landscaping and trees along streets.

## 5.16.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.16-1: The proposed project would generate additional residents that would increase the use of existing park and recreational facilities. [Threshold R-1]**

### General Plan

Buildout of the proposed project would allow for the development of up to 11,511 dwelling units (5,494 units in the City and 6,017 units in the SOI), which would result in an estimated population of 39,298 residents (18,720 residents in the City and 20,578 residents in the SOI). The proposed project would increase the existing population in the City and SOI from 202,630 residents to 241,928 residents by buildout. This increase in population would increase the use of existing park and recreational facilities.

There is no state or federal statute detailing how to calculate the City's level of park service. Additionally, there is no federal minimum level of park or recreation space. Typically, each jurisdiction determines the appropriate park standard based on the guidance provided by Section 666477 of the California Government Code, commonly referred to as the Quimby Act. The City's park standard is 3 acres of parkland per 1,000 residents. Table 5.16-2, *Demand for Public Parks in the City and SOI at General Plan Buildout,* summarizes the availability of parkland in the City. The General Plan would result in an increase in parkland demand of 56 acres in the City and 62 acres in the SOI, for a total of 118 acres.

Table 5.16-2 Demand for Public Parks in the City and SOI at General Plan Buildout

| | Existing Parkland Acres[1] (with Golf Courses[2]) | Proposed Park Standard (Acres/1,000 People) | Existing | | Project Demand | | Increase in Demand Acres |
|---|---|---|---|---|---|---|---|
| | | | Park Demand Acre[3] | Park Ratio (with Golf Courses) | Population | Park Demand Acre | |
| City | 352 (1,274) | 3.0 | 496 | 2.0 (7.6) | 184,086 | 552 | 56 |
| SOI[4] | 44 (560) | 3.0 | 112 | 1.9 (15.7) | 57,842 | 174 | 62 |
| Total | 396 (1,834) | 3.0 | 608 | 2.0 (9.1) | 241,928 | 726 | 118 |

Notes:
1 Private parks, mini parks, special use facilities, golf courses, and natural areas are not included in this assessment because they have no acreage standard in the General Plan.
2 Golf courses are land outside of the City's control but are available for public use. As of 2017, golf courses cover 922 acres in the City of Corona and 516 acres in the SOI. These figures do not account for the closed golf course in Coronita, which now serves as a natural open space for that community. Since golf course facilities are not maintained by the City of Corona and are private fee-based facilities, the golf courses are not counted toward satisfying the City's Quimby requirement for subdivisions.
3 Based on an existing population of 165,366 in the City and 37,264 in the SOI.
4 The existing parkland standard does not currently apply to the SOI and would only apply if annexed into the City under the General Plan.

While there is a deficiency of parkland of approximately 330 acres, if private golf courses are excluded, golf courses are available for public use, and there is approximately 474,167 acres of natural open space in or adjacent to the City, which is more than adequate publicly available recreational land in the City and SOI.

As identified in Table 5.16-2, the park needs of the additional growth would be accommodated by the existing parkland in the City and SOI. Furthermore, new development would be required to pay development impact fees and/or dedicate parkland or pay an in-lieu fee. The availability of new facilities would prevent the accelerated physical deterioration of existing facilities. Further, there are a number of other park and recreational facilities in the City such as trails, special use and mini parks, recreational programs and amenities, and joint-use school facilities, to serve the proposed residents.

Additionally, the General Plan Update includes policies that support a comprehensive and ample system of parks in the City:

- **PR-1.1** Seek all creative means to facilitate the provision of at least three acres for every 1,000 residents of useable, attractive, well-maintained, and amenity-appropriate parkland.
- **PR-1.4** Strengthen partnerships and collaborations with the Corona-Norco and Alvord school districts and other community organizations to increase the shared use of facilities for the effective delivery of services and programs.
- **PR-1.5** Operate and maintain park and recreational facilities to facilitate a high-quality experience; regularly modernize parks and associated facilities where needed, incorporating best practices in sustainable designs.

- **PR-1.7** Seek feasible alternatives to raise sufficient funds to finance regular maintenance repairs and modernization of existing public parks as well as the development of new parks.
- **PR-2.2** Provide state-of-the-art community recreational and other facilities that support existing programs, accommodate emerging needs, and are accessible to all members of the community.
- **PR-2.8** Partner with the community, nonprofits, schools, and other organizations to provide a wide range of recreation, educational, and wellness programs that foster a healthy lifestyle in Corona.

### Climate Action Plan

The update to the City's Climate Action Plan (CAP) focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not increase demand for recreational facilities or services in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts associated to park and recreational facilities.

**Impact 5.16-2: Implementation of the proposed General Plan Update would not result in environmental impacts associated with new and/or expanded recreational facilities. [Threshold R-2]**

### General Plan

Based on the City's population growth and availability of funds, portions of undeveloped land would be improved as parks and recreational facilities to provide residents with new recreational opportunities while meeting the City's parkland standard of 3 acres per 1,000 residents. Parks are also a permitted use under other land use designations (e.g. residential land uses), which could result in the development of additional parkland opportunities outside of park-designated parcels.

Development and operation of future new or expanded parks and recreational facilities may have an adverse physical effect on the environment, including impacts relating to air quality, biological resources, lighting, noise, and traffic. Environmental impacts associated with the construction of new and/or expansions of existing recreational facilities in accordance with the proposed land use plan are addressed separately. Construction-related air quality and noise impacts of the proposed project are described in Section 5.3, *Air Quality,* and Section 5.13, *Noise*, respectively. Addressing the site-specific impacts of these parks at this time would be beyond the scope of this programmatic EIR. Subsequent environmental review for individual park developments would be required. Further, potentially adverse impacts to the environment that may result from the expansion of parks and recreational facilities pursuant to buildout of the proposed land use plan would be less than significant upon the implementation of the General Plan Updates' goals and policies, and implementation actions and existing federal, state, and local regulations. Consequently, the proposed General Plan Update would not result in significant impacts relating to new or expanded recreational facilities.

### Climate Action Plan

The update to the City's CAP focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed CAP would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect recreational facilities or services in the City or SOI. Consequently, implementation of the CAP would result in less than significant impacts associated to park and recreational facilities.

## 5.16.5 Existing Regulations and Standard Conditions

### State Regulations

- California Public Park Preservation Act
- Mitigation Fee Act

### Local Regulations

- City of Corona Municipal Code, Chapter 16.23, *Development Impact Fees*
- City of Corona Municipal Code, Chapter 16.35, *Park Dedication and In-Lieu Fees*

## 5.16.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.16-1, and 5.16-2.

## 5.16.7 Mitigation Measures

No significant adverse impacts were identified, and no mitigation measures are necessary.

## 5.16.8 Level of Significance After Mitigation

No mitigation measures are required, and impacts would remain less than significant.

## 5.16.9 References

Corona, City of. 2019, July 1. Corona Development Impact.
https://www.coronaca.gov/home/showdocument?id=1590

# 5.17 TRANSPORTATION

This section of the draft environmental impact report (DEIR) evaluates the potential for implementation of the Corona General Plan Update (proposed project) to result in transportation impacts, based on vehicle miles traveled (VMT) in accordance with Senate Bill 743 and the City's VMT thresholds adopted on May 1, 2019. The analysis in this section is based in part on the following technical report(s):

- *Draft City of Corona CEQA Assessment – VMT Analysis Guidelines, prepared by Fehr and Peers on January 11, 2019*
- *Corona General Plan VMT Assessment, prepared by Fehr and Peers on March 27, 2019*
- *Draft Transportation Impact Study, Corona General Plan Update, prepared by Fehr and Peers in July 2019.*

Complete copy of these studies are included as technical appendices to this Draft EIR (Appendix K, L, and M). The traffic study and VMT Assessment was developed in conjunction with City of Corona transportation department staff using the Corona General Plan Travel Demand Forecasting Model (CGPM).

For the intersection level of service analysis (LOS) in Appendix M, the analysis was conducted using the Highway Capacity Manual 6th methodology (HCM 6) for the analysis of traffic conditions using the traffic software Synchro 10. HCM 6 estimates a quantitative delay in seconds per vehicle (sec/veh) at intersections. After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. These grades range from LOS A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in Table 5.17-1, *Intersection and Ramp Level of Service Descriptions.*

Table 5.17-1 Intersection and Ramp Level of Service Descriptions

| LOS | Description | Intersection Control Delay (seconds/vehicle) | |
|---|---|---|---|
| | | Signalized Intersections | Unsignalized Intersections |
| A | Operations with very low delay occurring with favorable progression and/or short cycle length. | ≤ 10 | ≤ 10 |
| B | Operations with low delay occurring with good progression and/or short cycle lengths. | >10 and < 20 | >10 and < 15 |
| C | Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear. | >20 and < 35 | >15 and < 25 |
| D | Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable. | >35 and < 55 | >25 and < 35 |
| E | Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. | >55 and < 80 | >35 and < 50 |
| F | Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths. | > 80 | > 50 |

Source: Fehr and Peers 2019

### Terminology

The following are definitions for terms used throughout this section:

- **Congestion Management Plan (CMP).** A federally mandated program within metropolitan planning areas to address and manage congestion through the implementation of strategies not calling for major capital investments.
- **Highway Capacity Manual (HCM).** The HCM provides methods for quantifying highway capacity, serving as a fundamental reference on concepts, performance measures, and analysis techniques for evaluating the multimodal operation of streets, highways, freeways, and off-street pathways. The methodology used to assess the operation of intersections is based on the HCM.
- **Levels of Service (LOS).** Roadway capacity is generally limited by the ability to move vehicles through intersections. A level of service (LOS) is a standard performance measurement to describe the operating characteristics of a street system in terms of the level of congestion or delay experienced by motorists. Service levels range from A through F, which relate to traffic conditions from best (uncongested, free-flowing conditions) to worst (total breakdown with stop-and-go operation).
- **Transportation Uniform Mitigation Fee (TUMF)**. TUMF is a program that ensures a fair share payment for increased traffic generated by new development projects in Western Riverside County.
- **Vehicles Miles Traveled (VMT).** The number of vehicle miles of travel is an indicator of the travel levels on the roadway system by motor vehicles. This estimate is based upon traffic volume counts and roadway length.
- **VMT per Service Population (VMT/SP).** Service population includes people who live (residents) or work (employees) in the study area. VMT/SP measures the transportation 'efficiency' of a project or plan.

## 5.17.1 Environmental Setting

#### 5.17.1.1 REGULATORY FRAMEWORK

### State Regulations

#### *Senate Bill 743*

On September 27, 2013, SB 743 was signed into law, starting a process that fundamentally changed transportation impact analysis as part of CEQA compliance. The legislature found that with the adoption of the SB 375, the state had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of GHG emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB 32]).

SB 743 eliminates auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as the sole basis for determining significant impacts under CEQA. As part of the new CEQA Guidelines, the new criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code Section 21099(b)(1)).

Pursuant to SB 743, the Natural Resources Agency adopted revisions to the CEQA Guidelines to implement SB 743 on December 28, 2018. The revised CEQA Guidelines establish new criteria for determining the significance of transportation impacts. Under the new Guidelines, VMT-related metric(s) that evaluate the significance of transportation-related impacts under CEQA for development projects, land use plans, and transportation infrastructure projects are required beginning on July 1, 2020. The legislation does not preclude the application of local general plan policies, zoning codes, conditions of approval, or any other planning requirements that require evaluation of LOS, but these metrics may no longer constitute the sole basis for determining transportation impacts under CEQA.

### *California Department of Transportation*

Intersections within incorporated cities associated with freeway on- and off-ramps fall under Caltrans jurisdiction. Caltrans approves the planning, design, and construction of improvements for all state-controlled facilities. Caltrans utilizes the Highway Capacity Manual 6 (HCM 6) methodology to evaluate intersections within its jurisdiction. LOS criteria for unsignalized intersections differ from LOS criteria for signalized intersections as signalized intersections are designed for heavier traffic and therefore a greater delay. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable, which can reduce users' delay tolerance. For state-controlled intersections, LOS standards and impact criteria specified by Caltrans will apply (see Table 5.17-1).

As stated in the "Guide for the Preparation of Traffic Impact Studies" (2002), "Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on State highway facilities." Consistent with the City and County requirements, this analysis defines LOS E or F as deficient for state highway facilities.

## Regional Regulations

### *Southern California Association of Governments*

The Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization for this region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs.

Every four years SCAG updates the Regional Transportation Plan (RTP) for the six-county region that includes Los Angeles, San Bernardino, Riverside, Orange, Ventura, and Imperial counties. On April 7, 2016,

the SCAG's Regional Council adopted the 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (2016 RTP/SCS). The SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas emissions from transportation (excluding goods movement). Current and recent transportation plan goals generally focus on balanced transportation and land use planning that:

- Maximize mobility and accessibility for all people and goods in the region.
- Ensure travel safety and reliability for all people and goods in the region.
- Preserve and ensure a sustainable regional transportation system.
- Maximize the productivity of our transportation system.
- Protect the environment and health of residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).
- Encourage land use and growth patterns that facilitate transit and active transportation.

Through implementation of the strategies in the RTP/SCS, SCAG anticipates lowering greenhouse gas emissions below 2005 levels by 8 percent by 2020, 18 percent by 2035, and 22 percent by 2040. Land use strategies to achieve the region's targets include planning for new growth around high quality transit areas and "livable corridors," and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles (SCAG 2016)

### *Riverside County*

The SOI is currently within the County of Riverside. All the study intersections in Riverside County are within Temescal Canyon Area Plan. The County of Riverside General Plan Circulation Element defines LOS "D" as the LOS standard for facilities in the Temescal Canyon Area Plan.

### *Riverside County Transportation Commission – Congestion Management Program*

In its role as Riverside County's Congestion Management Agency, the Riverside County Transportation Commission (RCTC) prepares and periodically updates the county's Congestion Management Program (CMP) to meet federal Congestion Management Process guidelines. The CMP in effect in Riverside County was approved by the RCTC in 2011. The CMP is currently under review and is planned to be incorporated in the Commission's Long Range Transportation Plan. All freeways and selected arterial roadways in the county are designated elements of the CMP system of highways and roadways. RCTC has adopted a minimum level of service threshold of LOS "E" for CMP facilities on the regional system of roadways and highways.

### *WRCOG Transportation Mitigation Uniform Fee*

The County of Riverside has a Transportation Mitigation Uniform Fee (TUMF), which is administered by the Western Regional Council of Governments (WRCOG). Under the TUMF, WRCOG collects fees from new

development with the purpose of funding transportation improvements such as roadway widening, new roadways, intersection improvements, traffic signalization, etc., for the purpose of mitigating future growth.

### Local Regulations

#### *City of Corona Development Impact Fees*

The City's capital improvement plans specify the types of improvements required to achieve circulation and their related goals, and the capital improvement plan provides a schedule of activities needed to fund, construct, and rehabilitate such improvements. The City of Corona has adopted LOS "D" as the minimum acceptable standard for roadway facilities (intersections and roadway segments). At some key locations, such as at heavily traveled freeway interchanges, LOS E may be adopted as the acceptable standard, on a case-by-case basis. Locations that may warrant the LOS E standard include Lincoln Avenue at SR-91, Green River Road at SR-91, Main Street at SR-91, McKinley Avenue at SR-91, Hidden Valley Parkway at I-15, Cajalco Road at I-15, and Weirick Road at I-15. In addition to payment of TUMF fees to the WRCOG (see above). The City requires payment of Development Impact Fees (DIF) per residential unit or non-residential square footage for street and signal improvements in the City to fund transportation improvements to achieve the City's circulation goals.

#### *City of VMT Thresholds*

In accordance with SB 743, the City of Corona adopted thresholds for VMT on May 1, 2019. The City of Corona's VMT Analysis Guidelines are included as Appendix K of this DEIR.

## 5.17.1.2 EXISTING CONDITIONS

### Existing VMT

The CGPM was used to estimate VMT. The VMT estimates incorporate the "full accounting" methodology, in that it accounts for the complete length of the trip from the origin to the destination and assigns 100 percent of that trip distance to the City of Corona.. VMT per service population (VMT/SP) estimates were modeled for the City and SOI for home-based trips and employment trips for existing conditions, as shown in Table 5.17-2, *Existing VMT*.

**Table 5.17-2 Existing VMT**

| Scenario | Total VMT | Existing VMT/SP |
|---|---|---|
| City of Corona | 7,093,655 | 30.0 |
| SOI | 1,295,079 | 31.1 |
| Total City + SOI | 8,385,277 | 30.2 |

Source: Fehr and Peers 2019c

## Existing Roadway Network

The City's roadway system and classifications are shown in Figure 15.5-1*, Road Network*. Corona's roadways are grouped into functional classifications based on two general criteria; first, the extent to which the road prioritizes the through movement of traffic; and second, the level of access to adjacent properties. Aside from these generalized characteristics, roadways vary in terms of right-of-way, width, number of lanes, intersection and traffic signal spacing, speed, and other characteristics (such as the presence of sidewalks, bikeways, landscaping, and improvements outside the right-of-way). Functional class is identified in the General Plan and Street Design Standards and is shown in Table 5.17-3, *Corona Functional Roadway Classification*.

Table 5.17-3 Corona Functional Roadway Classification

| Classification | General Purpose |
|---|---|
| Major Arterial | Major arterials have the highest traffic-carrying capacity, with the highest speeds and limited interference with traffic flow from driveways or abutting properties. They may be 4 or 6 lanes depending on traffic volumes, and may have center medians. Parking may or may not be allowed. Major arterials are 82 to 106 feet wide curb-to-curb within a 106- to 130-foot right of-way. Key major arterials include portions or all of Main Street, Magnolia Avenue, Ontario Avenue, Cajalco Road, River Road, McKinley Avenue, Grand Boulevard, and Green River Road. |
| Secondary Arterial | Secondary arterials connect traffic from collector streets to streets of higher classification with limited access to abutting properties. Secondary arterials carry some through traffic and may or may not provide on-street parking or Class 2 bike lanes. Secondary arterials are typically 4 lanes, 64 feet wide curb-to-curb, and within an 88-foot right-of-way. Secondary arterials include Foothill Parkway, Lincoln Avenue, and Hidden Valley Parkway. |
| Collector | Collectors serve as the intermediate routes in a road network. Collector streets may handle some localized "through" traffic from one local street to another; but their purpose is to connect local streets to the arterial network. Collectors typically are 44 feet wide curb-to-curb (2 lanes) within a 68-foot right-of-way and are often equipped with sidewalks and bicycle routes on one or more sides. |
| Mixed Use Boulevard | Mixed use boulevards are streets that serve land use patterns in the City's mixed use land use districts. A prime example is Sixth Street, which runs through the Circle and is designed to support a mixed use district and encourage pedestrian activity by having wide sidewalks and on-street parking where people will park and walk to multiple businesses |
| Special Residential | Special residential arterials are a type of street intended to accommodate land use patterns in the City's Circle and surrounding environment. These streets will include improvements sensitive to adjacent residential uses. These may include parking cutouts, raised medians, roundabouts, bike lanes, special treatments at pedestrian crossings, peak period parking, etc. |
| Local Street | Local streets principally provide vehicular, pedestrian, and bicycle access to property that is directly abutting the public right-of-way. Movement of through traffic on local streets is discouraged. Local streets are 40 feet wide curb-to-curb within a 64-foot right-of-way and have 2 lanes (1 in each direction). Sidewalks are included. |

Table 5.17-3 Corona Functional Roadway Classification

| Classification | General Purpose |
|---|---|
| Private Street | Streets not maintained by the City; they principally provide access to and within developments. Most of these streets are within multifamily residential developments; however, a few private streets are in single-family residential neighborhoods. Residents and/or homeowner associations manage and maintain these streets. |
| Rural Streets | Rural roads carry vehicles in very low volumes and can only be used in appropriate locations. The rural road carries less than 100 vehicles daily and has a 28-foot-wide travel width and 50-foot right-of-way. The high-traffic-volume rural road may carry up to 200 vehicles per day, and generally has a 36-foot travel width within a 50-foot right-of-way. |

Below is a description of regional and local access roads in Corona. Section 4.8, Intersection Operations Analysis, and Section 4.9, *Roadway Segment Operation Analysis*, in the Traffic Impact Analysis (see Appendix M) include an evaluation of existing intersection and roadway LOS, respectively.

- **Interstate 15 Freeway (I-15)** is an interstate highway that is oriented in the north-south direction. In the vicinity of the project, I-15 is a ten-lane facility.

- **State Route 91 (SR-91)** is a state highway that is oriented in the east-west direction. Near the study area, SR-91 is a fourteen-lane facility west of the I-15 interchange and narrows to a nine lane facility east of the I-15 interchange. The SR-91 express lanes are built in the median of SR-91 and extend from the SR-55 interchange to the I-15 Interchange.

- **State Route 71 (SR-71)** is a 15-mile state highway between Interstate 15/State Route 57 and State Route 91 and is oriented in the north-south direction. Near the study area, SR-71 is a four lane-lane facility.

- **6th Street** is classified as a four-lane mixed-use boulevard, with a two-way center turn lane and Class II Bicycle Lanes. The roadway is an east-west facility that runs from SR-91 to S. Main St. 6th Street is one of the City's main corridors running through Downtown.

- **Main Street** is classified as a six-lane major arterial between Hidden Valley Parkway and West Sixth Street. South Main Street is classified as a special residential arterial and four lane major arterial from East Grand Boulevard to Foothill Parkway. The roadway is a north-south facility that connects residences to major points of interest, such as the North Main Cor Metrolink Train Station.

- **Magnolia Avenue** is classified as a six-lane major arterial between South Main Street and East 6th Street. The roadway is a northeast-southwest facility that provides access from the City of Corona to SR-91 and the City of Riverside. The roadway has a speed limit of 40 MPH and is surrounded by high density residential, commercial, and mixed-use land uses.

- **Ontario Avenue** is classified as a two-lane collector from Paseo Grande to Mangular Avenue and is classified as a four-lane major arterial from Mangular Avenue to South Main Street. From South Main

Street to I-15, Ontario Avenue is classified as a six-lane major arterial. The roadway is a major east-west corridor that provides access to the neighboring City of El Cerrito and connects to I-15.

- **Cajalco Road** is classified as a four-lane secondary roadway from Masters Drive to Bedford Canyon Road and as a six lane major arterial from Bedford Canyon Road to the eastern City limits. This roadway is an east-west connector and provides the City of Corona access to The Crossings at Corona – a major shopping center.

- **River Road** is classified as a four-lane major arterial from Corydon Street to North Main Street. This roadway is northwest-southeast facility and connects the neighboring City of Eastvale to the north.

- **McKinley Street** is classified as four-lane major arterial from Park View Drive to Magnolia Avenue and is a north-south facility.

- **Grand Boulevard**, also known as "The Circle," is classified as a four-lane major arterial. The roadway was built in circular fashion and bisects South Main Street, East 6th Street, North Main Street, and West 6th Street.

- **Green River Road** is classified as a six-lane major arterial from SR-91 to the Palisades Drive and as a four-lane major arterial from Palisades Drive to Paseo Grande. The northwest-southeast facility provides access to SR-91 that connects to Orange County and Riverside. In addition, Green River Road contains a Class II Bicycle Lane that connects to the Santa Ana River Path.

- **Foothill Parkway** is classified as four-lane secondary road from Paseo Grande to I-15. The roadway is an east-west facility that provides an alternative route that connects SR-91 to I-15. The westerly extension of Foothill Parkway was completed in 2016, which extended the four lane road from Lincoln Avenue to Paseo Grande, approximately 2.5 miles. The roadway provides additional mobility options for Corona residents, especially those who frequently travel on the southern and western portions of the City.

- **El Cerrito Road** is classified as a four-lane secondary road. This roadway is an east west facility that connects to I-15. El Cerrito Road transitions to Foothill Parkway west of I-15.

- **Lincoln Avenue** is classified as a four-lane secondary road form Parkridge Avenue to Ontario Avenue and a four-lane major arterial from Ontario Avenue to Mountain Gate Drive. Lincoln Avenue is north-south facility that connects the City of Corona to SR-91.

- **Hidden Valley Parkway** is classified as a four-lane secondary roadway from SR-91 to Parkview Drive. The facility helps connect I-15 and SR-91.

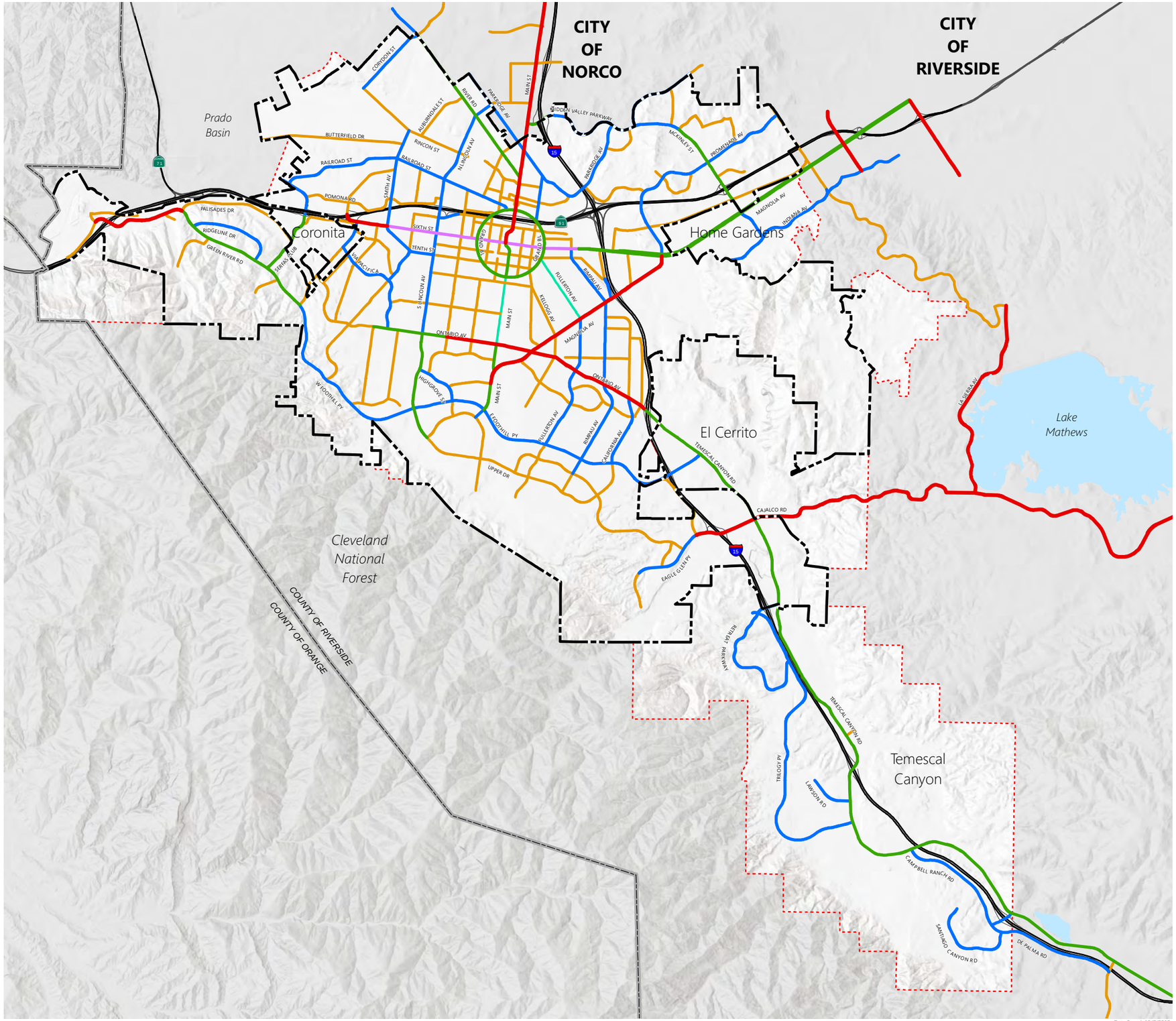


Figure 5.17-1

# ROAD NETWORK

## Legend

- City Boundary
- Sphere of Influence Areas
- Major Arterial 6 Lane
- Major Arterial 4 Lane
- Mixed Use Boulevard 4 Lane Divided/Undivided
- Secondary 4 Lane
- Collector
- Collector
- Special Residential
- Freeway

Date Saved: 10/7/2019

*Source:*
*City of Corona, 2019*

CORONA
General Plan
EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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## Existing Transit Facilities

Public transportation is a vital part of the circulation system within Corona. Transit expands mobility options to citizens that may not be able to afford or physically operate other means of travel, while some choose not to drive. The City's transit network includes intercity buses, local buses, demand-responsive service, and commuter rail; all of which help people move. City of Corona, Riverside Transit Agency (RTA) transit routes are shown in Figure 5.17-2, *Transit Routes*.

### *Corona Cruiser and Dial-A-Ride*

The Corona Cruiser is a fixed route service operated by the City of Corona. The system travels along two routes in the City, which include the Red and Blue Lines. Bus routes connect with RTA buses, North Main Metrolink commuter train station, and Park & Ride lots. The local bus service provides access to major points of interest in the community such as Corona City Hall, Corona Public Library, shopping centers, and medical centers. More specifically, major trip generators include commercial and retail areas along McKinley Street and Sixth Street, the Crossings shopping area on Cajalco Road, medical facilities along Magnolia Avenues, El Cerrito Middle School, and Centennial High School.

The Dial-A-Ride program, which has been operated by the City of Corona since 1977, is an on-demand, shared-ride transit system. The service provides mobility to seniors and persons with disabilities. Riders call ahead to schedule their trip and can receive curb-to-curb service in the City and neighboring county areas. Currently, Dial-A-Ride offers service Monday through Saturday. Table 5.17-4, *Existing Annual Transit Passenger Characteristics*, summarizes exiting users for local-serving transit services. Corona continues to invest and improve local transit service.

**Table 5.17-4 Existing Annual Transit Passenger Characteristics**

| Dial-A-Ride | | | Corona Cruiser | | |
|---|---|---|---|---|---|
| Type | Passengers | Percent | Type | Passengers | Percent |
| Seniors / Persons with Disabilities | 53,460 | 87% | Seniors / Persons with Disabilities | 50,850 | 23% |
| General Public | 8,580 | 8% | General Public | 55,935 | 43% |
| Metrolink Transfers | 1,980 | 2% | Metrolink Transfers | 3,390 | 1% |
| Personal Care Attendants | 1,320 | 2% | RTA Transfers | 10,170 | 5% |
| Children | 660 | 1% | Children | 5,085 | 2% |
| — | — | — | Students | 44,070 | 25% |
| Total | 66,000 | 100% | Total | 169,500 | 100% |

Source: Fehr and Peers 2019c

### *Riverside Transit Agency (RTA)*

Most of the available public transportation is provided by the Riverside Transit Agency (RTA). RTA provides four bus routes to the West Corona Metrolink Station, the City of Fullerton, the City of Murrieta, and the City of Lake Elsinore. Overall, RTA serves the City of Corona, as well as 2,500 square miles in western Riverside County and connects the Cities of Riverside, Norco, and Orange. RTA provides access to the Corona Park-N-Ride Lot, the West Corona Station on the Metrolink Commuter Rail system, and the commuter link express bus route (206) that travels the cities of Corona, Lake Elsinore, Murrieta, and Temecula during the morning and evening peak hours.

### *MetroLink*

Metrolink is a commuter rail program operated by the Southern California Regional Rail Authority (SCRRA), providing service from outlying suburban communities to employment centers such as Burbank, Irvine, and downtown Los Angeles. The 91 Line and the Inland Empire/Orange County Line serve the Metrolink stations in West Corona and North Main Corona. The West Corona station is located on Auto Center Drive near SR-91, and the North Main Corona station is located on Blaine Street that is just east of North Main Street. The 91 Line provides access between Riverside and Los Angeles, while the Inland Empire/Orange County Line provides access between Irvine and Riverside.

### *Orange County Transportation Authority*

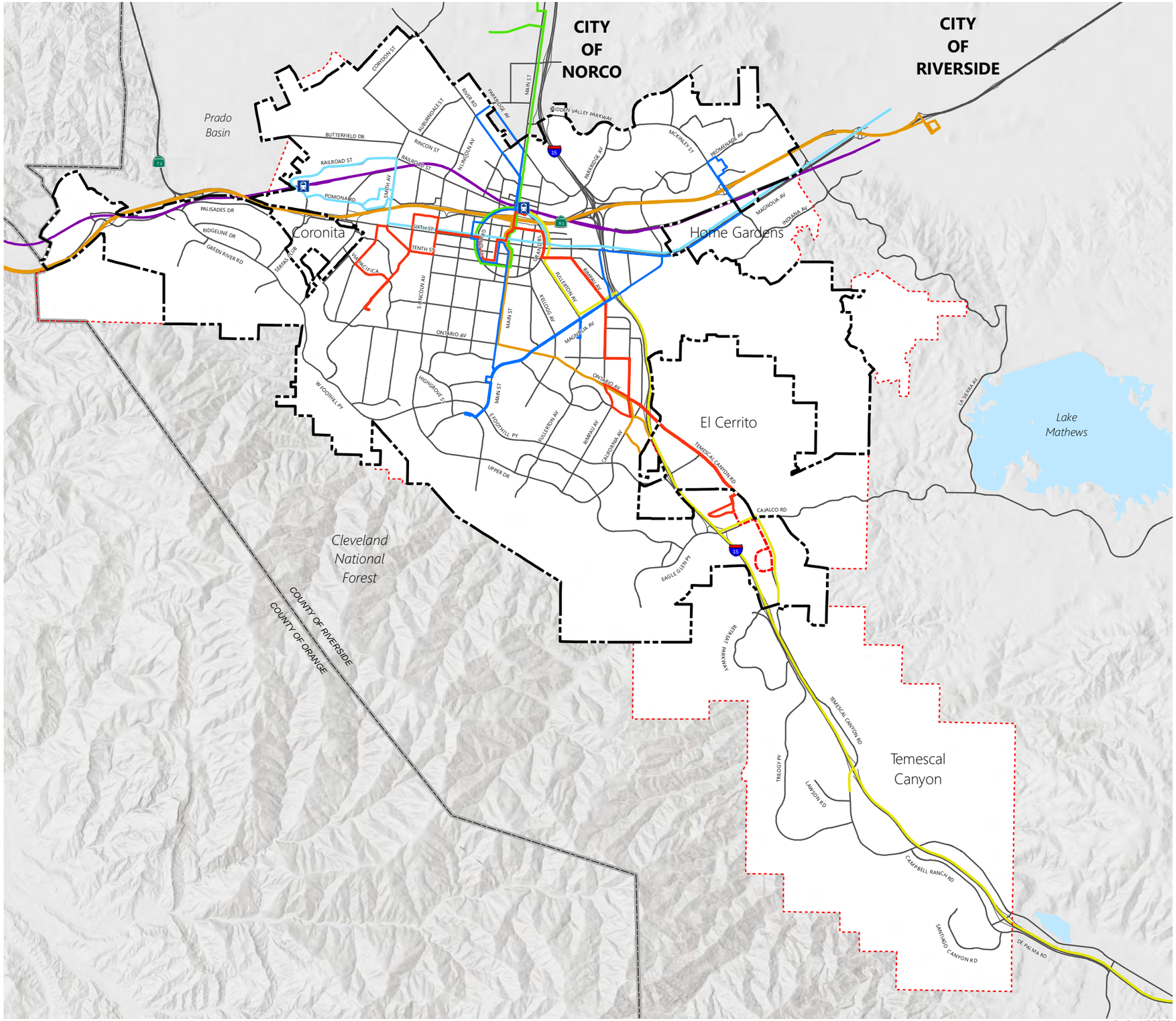
Corona is closely tied to the Orange County and the Riverside job market, which creates a demand for transit service. OCTA has the Riverside/Corona to South Coast Metro Express route 794 that uses the SR-91 and SR-55 freeways to connect the two counties. The bus route is an AM and PM peak hour bus service that connect passengers to South Coast Plaza, Harbor Gateway Business Center, and several universities. OCTA facilitates easy transfers by accepting RTA passes on the 794 bus route.

### *Paratransit*

Paratransit is an alternative mode of flexible passenger transportation that does not follow fixed routes or schedules. Vans, mini-buses, and taxis are typically used to provide paratransit service. Paratransit services vary considerably on the degree of flexibility they provide their customers. At their simplest, they may consist of a taxi or small bus that will run along a more or less defined route and then stop to pick up or discharge passengers on request. At the other end of the spectrum (fully demand-responsive transport), the most flexible paratransit systems offer on-demand call-up door-to-door service from any origin to any destination in a service area.

Figure 5.17-2

# TRANSIT ROUTES




Date Saved: 10/8/2019

## Legend

- City Boundary
- Sphere of Influence Areas
- Metrolink Station

**City of Corona**

- Corona Cruiser Blue Line
- Corona Cruiser Red Line
- Corona Red Line (Saturday Only)

**Riverside Transit Agency**

- RTA Route 1
- RTA Route 3

**Commuter Routes**

- OCTA 794
- RTA Route 206
- Metrolink

*Source:*
*Corona 2019*
*Riverside Transportation Agency 2019*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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## Existing Bicycle Facilities

In 2001, the City of Corona developed and adopted a Bicycle Master Plan, which was recertified on March 15, 2006. The Plan calls for bicycle lanes on various streets in order to increase emphasis on active transportation. Figure 5.17-3, *Bikeway Plan*, shows the various existing and planned bikeways for the City of Corona. Improving walking and bicycling facilities can improve their desirability for short distance trips, school trips, and recreational activities, while also enhancing the City's urban environment. By shifting mode share to include higher rates of active travel, the City can reduce greenhouse gas emissions, promoting a healthy lifestyle, consistent with AB 32. The 2006 Bicycle Master Plan proposes bicycle facilities consisting of Class I to Class III throughout the City. Since the adoption of the plan, the City has developed an extensive network of bicycle lanes. The sections below describe the different types of bicycle facility classifications currently in use in Corona:

- **Class I Bikeways (Off-Street Bike Paths)** are completely separate facilities designated for the exclusive use of bicyclists and pedestrians with minimal vehicle crossings. Currently, Corona has five Class I bikeways at the following locations:
  - Parallel to SR-91, entering the Santa Ana River Trail
  - A path connecting West Foothill Parkway and Mangular Avenue
  - Skyline Drive Path
  - Along Foothill Parkway connecting Spring Meadow Drive and Heartland Way
  - Along Foothill from Border Avenue to Chase Drive
- **Class II Bikeways (Bike Lanes)** are striped lanes designated for the use of bicycles on a street or highway. Vehicle parking and vehicle/pedestrian cross-flow are permitted at designated locations. Class II Bikeways have also been employed as traffic calming measures throughout Corona to assist in narrowing lane widths and limiting vehicle speeds.
- **Class III Bikeways (Bike Routes)** are only identified by signs or pavement markings. A bicycle route is meant for use by bicyclists and motor vehicle travel (i.e., shared use).

Table 15.17-5, *Completed and Planned Bikeways in Corona*, summarizes the total number of centerline miles currently existing and the total number of planned miles.

Table 5.17-5 Completed and Planned Bikeways in Corona

| Bicycle Facility | Centerline Miles | | |
|---|---|---|---|
| | Completed | Planned | Total |
| Class I (Path) | 1.5 | 19.6 | 21.1 |
| Class II (Bike Lane) | 60.4 | 36.3 | 96.7 |
| Class III (Route) | 7.7 | 36.5 | 44.2 |
| TOTAL | 69.6 | 92.4 | 162.0 |

Source: Fehr and Peers 2019c

## Existing Pedestrian Facilities

The suburban tract housing layout, ample parking, major through streets, and separation of land uses that comprise a notable portion of the city has encouraged an automobile-oriented community. Although walking may not be a viable form of transportation for errand trips, large neighborhood sidewalks provide a walking environment that accommodates walking trips for leisure and exercise. A general evaluation of the existing pedestrian environment in Corona is provided in Table 5.17-6, *Evaluation of Existing Pedestrian Facilities*.

Table 5.17-6 Evaluation of Existing Pedestrian Facilities

| Criteria | Evaluation |
|---|---|
| Sidewalk Continuity | Most major roadways in Corona have continuous sidewalks on one or both sides. Most residential streets also have continuous sidewalks on both sides of the street. |
| Sidewalk Conditions | Throughout the City, sidewalks are generally in good condition, free of cracks, fissures, or uplift. The City of Corona has also made improvements to sidewalks in older neighborhoods that lack accessibility. A limited number of sidewalks with cracked pavement were observed. Sidewalks are generally wide enough to accommodate multiple users, though in some cases there are obstructions due either to various utility boxes or overgrown landscaping. The City is currently undertaking Citywide sidewalk improvements. |
| Shading | Generally, shading on Corona sidewalks is extensive. Most shading is provided in central parts of the City, such as Downtown. There is also extensive shading throughout the city, including suburban tracts. Some shade is provided by trees on private properties adjacent to sidewalks. In few cases, there is no shading whatsoever. |
| Grade | Several of the major arterials in Corona have slopes, especially in southern portions of the City. Some residential streets have significant grade, while some near downtown are relatively flat. Land areas with limited slope can encourage more active forms of transportation. |
| Amenities Offered | Portions of 6th Street provide a mix of land uses that can make walking trips more attractive. A significant portion of the bus stops in Corona offer pedestrian-oriented amenities such as a bench or a shaded bus shelter. There are also a number of bus stops with aging facilities or no shade. The City has few traffic calming amenities on neighborhood streets which can make walking less attractive, especially for children or older adults. |
| Buffers | Parking is generally not permitted along major arterials of Corona. Buffers that exist consist of bike lanes and some landscaping, such as trees or parkways, between sidewalks and automobile travel lanes. Bike lanes on streets such as East Harrison Street provide a buffer between sidewalks and moving vehicle traffic. On some City sidewalks, such as West 2nd Street, sidewalks lack a buffer between the pedestrian right-of-way and vehicle travel lane. |

Source: Fehr and Peers 2019c

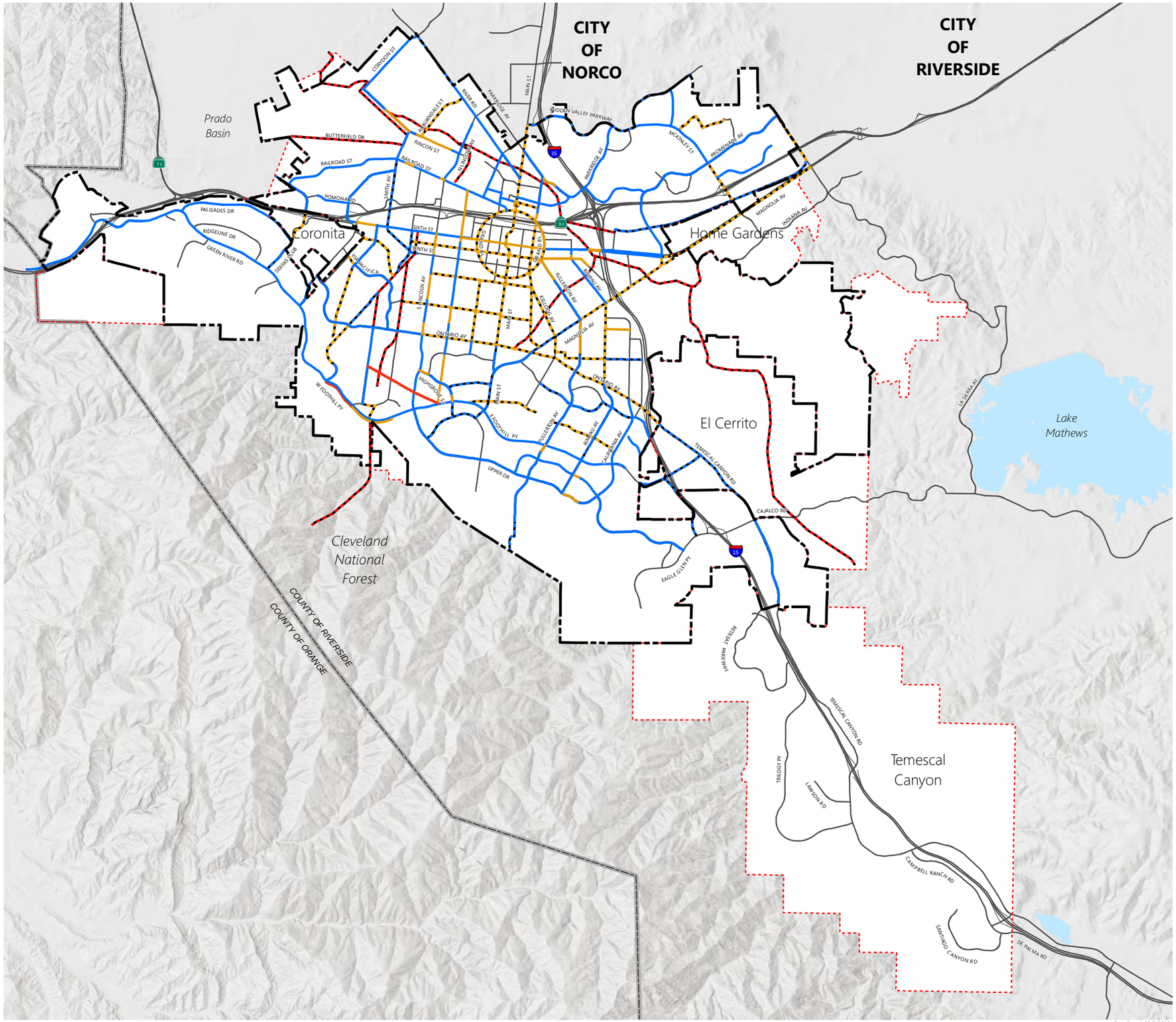


Figure 5.17-3

# BIKEWAY PLAN

Legend

- City Boundary
- Sphere of Influence Areas

**Existing Bikeways**

- Existing Class I
- Existing Class II
- Existing Class III

**Proposed Bikeways**

- Proposed Class I
- Proposed Class II
- Proposed Class III

Date Saved: 10/7/2019

*Source:*
*City of Corona, 2017*

CORONA General Plan EIR

Miles
0 0.5 1 1.5 2

PLACEWORKS

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### Truck Routes

Industrial uses and interstate shipping require truck access and mobility for the delivery of parts and raw materials, movement of inventories, and shipping of finished goods to the marketplace. Commercial and residential uses require the delivery of goods and services for daily operations. Regional truck movements occur on the freeway system, and local truck deliveries to and from land uses in Corona occur on the arterial and local roadway systems. SR-91 and I-15 interstate freeways are critical pieces of the goods movement infrastructure. Corona is also bisected by the BNSF Transcomm line, which extends from the Port of Los Angeles eastward into the Inland Empire. The City is working to install grade-separated rail crossings, where feasible. Figure 5.17-4, *Goods Movement Routes*, illustrates the City's truck and rail routes.

## 5.17.2 Thresholds of Significance

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

T-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

T-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

T-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

T-4 Result in inadequate emergency access.

### 5.17.2.1 CITY OF CORONA SIGNIFICANCE THRESHOLDS

### VMT Thresholds

As described under SB 743 (Regulatory Background), as of July 1, 2020, auto delay (traffic congestion) can no longer be used as the criteria for transportation analysis under CEQA. Automobile traffic impacts have historically been analyzed with LOS methodologies based on roadway capacity metrics (volume/capacity). LOS will be replaced with a new metric—VMT. The City of Corona adopted significance thresholds and methodology to comply with SB 743 on May 1, 2019, and is using this metric to determine transportation impacts associated with buildout of the General Plan. Based on the City's guidelines:

- **Project-Level Impact** is considered significant if the buildout of the project increases the total daily VMT/SP above the baseline level (existing conditions) for the City.
- **Cumulative Impact** is considered significant if the buildout daily VMT/SP exceed the daily VMT/SP of the current General Plan (no project alternative).

### Multimodal Facility Impacts

A significant impact would occur to transit, bicycle, and/or pedestrian facilities if the project would:

- Disrupt or interfere with existing or planned public transit services or facilities.
- Create an inconsistency with policies concerning transit systems set forth in an applicable General Plan or other applicable adopted policy document.
- Disrupt or interfere with existing or planned bicycle/pedestrian facilities.
- Result in unsafe conditions for pedestrians, including unsafe pedestrian/bicycle or pedestrian/vehicle conflicts.
- Result in unsafe conditions for bicycles, including unsafe bicycle/pedestrian or bicycle/vehicle conflicts.
- Create an inconsistency with policies related to bicycle or pedestrian systems set forth in an applicable General Plan, Bicycle Plan, or other applicable adopted policy document.

#### 5.17.2.2 RIVERSIDE COUNTY TRANSPORTATION COMMISSION SIGNIFICANCE THRESHOLDS

Most local agencies in Riverside County and Caltrans have adopted LOS standards of "C" or "D" in an effort to maintain a desired LOS for the local circulation system. To address CMP legislative requirements, and establish a minimum LOS along the regional system of roadways and highways within the County, RCTC has approved the following threshold:

- **CMP Impacts** are considered significant if regional roadways and highways facilities exceed LOS "E". Roadways and intersections that were operating at LOS "F" in 1991 are exempt from the CMP requirements in accordance with the CMP Statutes, which include SR-91 in the City of Corona.

## 5.17.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential transportation and traffic impacts as a result of implementation of the proposed project.

### Land Use Element

#### *Type, Distribution, and Form of Land Uses*

- **LU-1.1** Accommodate uses that support the diverse needs of Corona's residents, including opportunities for living, commerce, employment, recreation, education, culture, entertainment, civic engagement, and social and spiritual activity that are in balance with natural open spaces.
- **LU-1.2** Emphasize the development of uses that sustain Corona as a cohesive, distinct, and self-sustaining community and minimize the need for residents to travel to surrounding communities for retail goods, services, and employment.

Figure 5.17-4

# GOODS MOVEMENT

Legend

- City Boundary
- Sphere of Influence Areas
- Existing
- Modifications

*Source:*
*City of Corona, 2017*

CORONA
General Plan
EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

Date Saved: 10/7/2019

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- **LU-1.3** Accommodate uses that maintain or enhance Corona's fiscal viability and account for current and emerging market demands, while maintaining and improving the quality of life for current and future residents.

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)

- **LU-1.5** Accommodate land use development in balance with the preservation and conservation of open spaces for recreation, aesthetic relief, natural resource value, and public safety (such as floodways, seismic fault zones, and other).

- **LU-2.1** Locate and design development to reflect Corona's unique physical setting considering its natural topography, environmental resources, natural hazards, and opportunities for views in accordance with this plan's policies.

- **LU-2.2** Require that land uses be located and designed to reflect and incorporate the property's natural drainage courses, to the extent feasible in consideration of public safety and habitat preservation.

- **LU-2.3** Concentrate land uses within prescribed areas to minimize impacts on natural environmental resources and maximize the efficiency of supporting infrastructure, transit use, and the vitality of Corona's activity and business centers.

- **LU-2.4** Maintain and reinforce the City's urban form and pattern of viable commercial and business centers and residential neighborhoods; prevent incompatibilities in land uses that could detract from the appearance, quality, or functioning of each area.

- **LU-2.5** Prioritize and reinforce the revitalization of Corona's historic Downtown as a major activity center. Encourage mixed land-uses to maximize customer base and access to transportation and public services.

- LU-2.6 Maintain a land use pattern that accommodates a diversity of commercial districts that are differentiated by their function, customer base, and physical character and avoid unnecessary competition.

- **LU-2.7** Promote the re-use of economically obsolete and inefficient commercial corridors by consolidating retail and supporting uses into distinct activity nodes and redeveloping intervening areas for mixed use projects that integrate commercial and residential uses or single residential projects.

- **LU-2.8** Integrate a complementary mix of open spaces (including parks, trails, and landscaping) within the City's existing urban fabric to enhance character, soften hardscapes, beautify the community, and create a high quality of life..

- **LU-3.1** Permit land uses and development consistent with the Corona General Plan Land Use Designations.

- **LU-3.2** Require that development occur within the range of maximum and minimum densities consistent with land use designations allowed by the general plan and implemented through zoning districts.

- **LU-3.3** Allow flexibility in the defined land use types, densities, and intensities to account for changes in housing needs and characteristics, industrial and employment markets, and retail commercial enterprises that will occur during the implementation of this plan. Such deviations shall be considered only when found to be consistent with the plan's vision, goals, and overall policy intentions for community places, character, economy, environmental sustainability, and public safety..

### *Community Quality and Sense of Place*

- **LU-6.2** Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through::

  - Site design—concentration and intermixing of development to minimize vehicular trips and promote walking and building orientation for solar access and heat gain and loss

  - Landscaping—drought-tolerant species, use of recycled water for irrigation, and other purposes

  - Capture of rainwater and re-use on site

  - Building design and construction materials—energy-and water efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques

### *Residential Neighborhoods*

- **LU-7.1** Accommodate the development of a diversity of residential housing types that meet the needs of Corona's population in accordance with the Land Use Plan's designations, applicable density standards and design and development policies, and the adopted housing element.

- **LU-7.2** Promote the development of innovative forms of housing that increase the diversity and affordability of units to meet the needs of the population, such as mixed-use that integrate housing with commercial and other uses, live/work structures, loft housing, and other similar housing types.

- **LU-8.2** Provide opportunities for the development of new housing adjacent to the Downtown and the Sixth Street corridor, which may include a variety of housing types, including mixed use projects, that integrate housing with commercial and office uses.

- **LU-8.3** Provide opportunities for housing that are in pace with adopted state legislation and allow for a variety of housing types such as integrating residential with commercial and office developments, near activity centers and in transit oriented areas near the Metrolink Station.

- **LU-8.4** Provide opportunities for "live-work" development to accommodate artists, craft persons, and professionals working from home as a buffer between residential and nonresidential uses in Downtown, North Main Street, and adjoining commercial and industrial corridors and districts.

- **LU-9.3** Encourage the integration of a mix of housing types into new residential neighborhoods, which may include single-family homes, townhomes, row houses, live-work, and multi-family units to the extent the integration is appropriate and complements surrounding land uses.

- **LU-9.5** Establish and locate a focal point of identity and activity within walking distance of all housing in new residential neighborhoods that may consist of a school, community meeting facilities, parks, nonresidential areas with public facilities, and similar uses.

- **LU-9.7** Site and design new residential developments to enhance neighborhood quality by:

  - Establishing a network of streets and pedestrian paths that promote neighborhood activity, internal access, and connectivity to surrounding areas.

  - Enhancing the visual quality and character of street frontages through extensive landscape and reduction of the visual dominance of garages.

  - Promoting architectural diversity for residential, commercial, and other supporting uses consistent with established design guidelines.

  - Varying heights and rooflines of new development (residential, commercial, etc.) along the street frontages to allow for visual interest.

### *Commercial and Office Districts*

- **LU-11.2** Maintain a range of retail commercial and office uses and districts in the City that are differentiated by their functional role, customer base, and physical form and character. Such districts include:

  - Mixed-use Downtown that serves as the center of Corona's identity and activity; provides a wide range of retail, commercial, and specialty goods; and is designed and developed to emphasize pedestrian activity.

  - Community retail districts that contain larger-format uses, national retailers, restaurants, and overnight accommodations, that serve the region and the local community, generally located in proximity to freeway off-ramps.

  - Neighborhood shopping districts providing basic goods and services, such as grocery stores and personal services, within easy access and that are intended to serve the needs of residents living in nearby neighborhoods.

- **LU-11.9** Require that new development of multi-tenant commercial and office projects be designed to convey a unified and high-quality character in consideration of the following principles:
  - Avoidance of sense of single building volume and mass through modulation, articulation, setbacks, and other techniques.
  - Consistent architectural design vocabulary, building articulation, materials, and colors.
  - Linkage of individual storefronts and structures through common pedestrian walkways, plazas, and other open spaces that provide amenities for customers.
  - Variation of building heights and rooflines to avoid uninterrupted planes and promote visual interest.
  - Architectural treatment of parking structures consistent and integrated with commercial and business buildings.
  - Provision of pedestrian connections to off-site pedestrian areas, where appropriate.

### *Industrial Districts*

- **LU-12.9** Require that heavy truck and vehicle access for industrial land uses be effectively placed and managed to ensure that it is safe and efficient for the present use and that it minimizes noise, odor, vibration, traffic, queuing back onto streets or existing or adjacent properties, and other safety impacts on adjoining uses.

### *Mixed-Use Districts*

- **LU-13.1** Accommodate mixed-use projects that integrate housing with retail, office, and other uses within the same structure or on the same site, or the development of the property exclusively for commercial and office uses in accordance with the land use plan's designations and applicable density standards and design and development policies.

### *Opportunity Districts and Sites*

- **LU-17.25** Repair, upgrade, and maintain the quality of public streets and sidewalks in the Downtown to encourage pedestrian activity, improve roadway safety, and beautify streets.
- **LU-18.8** Provide pedestrian and multi-modal transportation connections and improvements that link North Main Street uses to the Metrolink station.

## Circulation Element

### *Local Thoroughfares and Routes*

- **CE-1.1** Implement complete streets by limiting capacity to only serve expected demand on City streets (e.g., do not overbuild roadways) while discouraging regional cut-through and maximizing accessibility for users to adjacent land uses in a safe and efficient way.

- **CE-1.2** Support roadway maintenance programs that inspect, repair, and rehabilitate pavement surfaces in order to preserve the high quality of City streets and thoroughfares.

- **CE-1.3** Provide for safe roadway conditions by adhering to nationally recognized improvement standards and uniform construction and maintenance practices.

- **CE-1.4** Design and employ traffic control measures to ensure City streets and roads function with safety and efficiency.

- **CE-1.5** Maintain Level of Service D or better on arterial streets in the City. Develop and maintain a list of locations where LOS E or LOS F are considered acceptable and would be exempt from this level of service policy. Considerations for LOS exemption include lack of available right-of-way, environmental constraints, or other modes of travel (such as bicycle or pedestrians). Key locations identified for LOS exemption are:

    - Green River Road at SR-91
    - Lincoln Avenue at SR-91
    - Main Street at SR-91
    - Sixth Street, between East Grand Boulevard and West Grand Boulevard
    - McKinley Avenue at SR-91
    - Hidden Valley Parkway at I 15
    - Magnolia Avenue at I-15
    - Ontario Avenue at I-15
    - El Cerrito Road at I-15
    - Cajalco Road at I 15
    - Weirick Road at I 15
    - Other locations as approved by the City

- **CE-1.6** Coordinate street system improvements and signalization with regional transportation efforts, including the Regional Transportation Plan, the State Transportation Improvement Program, the Riverside County General Plan, the Community and Environmental Transportation Acceptability Process, the Congestion Management Program, and other relevant regional and subregional efforts and programs.

- **CE-1.7** Limit driveway and local street access on arterial streets to maintain a desired quality of traffic flow. Wherever possible, consolidate driveways and implement access controls during redevelopment of adjacent parcels.

- **CE-1.8** Restrict on-street parking on arterial streets, and in cases where on-street parking may be necessary, implement design features that separate parking spaces from street lanes.

- **CE-1.9** Design and operate secondary, local, and collector streets to discourage their use as through traffic routes. Utilize residential neighborhood traffic control techniques to reduce cut-through traffic impacts.

- **CE-1.10** Require a traffic analysis to be prepared in accordance with the City's adopted Traffic Impact Study Guidelines and require projects to mitigate impacts on the City's circulation system that exceed the City's adopted service thresholds for near term and future conditions.

- **CE-1.11** Provide all residential, commercial, and industrial areas with efficient and safe access for emergency vehicles, including undeveloped areas or those on the hillsides in high or very high fire hazard severity zones.

- **CE-1.12** Consider the effects on transportation systems of public utility improvements, including extensions of underground pipelines and overhead transmission lines and associated utility rights-of-way.

- **CE-1.13** Ensure that, to the extent possible, all pipelines and electrical transmission lines are placed underground.

- **CE-1.14** Design Sixth Street from Smith Avenue to El Sobrante Road as a Mixed Use Boulevard, including measures that support mixed-use development. Allow for the design of Sixth Street from East Grand Boulevard to West Grand Boulevard to be a Downtown District by reducing this segment to two travel lanes and providing a complete street concept to support Downtown uses.

- **CE-1.15** Recognize the unique character of Special Residential Streets, including Main Street south of Grand Boulevard and Fullerton Avenue between Magnolia Avenue and Grand Boulevard. Implement improvements sensitive to adjacent residential uses. These may include parking cutouts, raised medians, roundabouts, bike lanes, special treatments at pedestrian waycrossings, peak-period parking restrictions, and so forth.

- **CE-1.16** Plan for emerging autonomous vehicles and transportation network companies (TNCs) by designing and/or managing curb space to allow for safe pick-up and drop-off.

### *Intercity and Regional Transportation*

- **CE-2.1** Support RCTC and Caltrans efforts to improve management of the SR-91, I-15, and SR-71. Promote improvements that reduce regional cut-through traffic on City streets and work with RCTC and Caltrans to ensure that accessibility to these facilities is provided to Corona residents.

- **CE-2.2** Support regional transportation infrastructure that would provide alternative connections and access to neighboring counties and reduce the volume of cut-through traffic on City streets.

- **CE-2.3** Coordinate impacts of new roadway connections with adjacent cities and Riverside County to ensure consistency in design and operations of the new facilities and connections.

- **CE-2.4** Implement the Circulation Element map concurrent with new development and through redevelopment.

- **CE-2.5** Pursue available federal and state funding sources for mitigation of transportation impacts, construction of new facilities, and maintenance of existing facilities.

### *Transportation Management*

- **CE-3.1** Implement and maintain traffic signal coordination and advanced traffic management strategies throughout the City to the maximum extent practicable and integrate signal systems with adjacent jurisdictions and Caltrans.

- **CE-3.2** Implement, maintain, and enforce the traffic demand and system management recommendations in the South Coast Air Quality Management District's Air Quality Management Plan and in the Riverside County Congestion Management Program.

- **CE-3.3** Encourage employers to reduce vehicular trips by offering to employees commute trip reduction programs, such as transit fare subsidies, alternative work schedules and telecommuting, employer-sponsored van pools or shuttles, ride share programs, and bike share.

### *Public Transportation*

- **CE-4.1** Maintain local fixed-route and demand-responsive transit service to ensure mobility within Corona and to ensure that users have adequate access to public facilities, services, and employment options.

- **CE-4.2** Work with the Riverside Transit Agency to identify needs for additional bus services and enhancements to existing services.

- **CE-4.3** Encourage the development of additional regional public transportation services and facilities, including park-and-ride near the SR-91 and I-15 freeways and mobility hubs at key transit stations.

- **CE-4.4** Ensure public transit opportunities (e.g., fixed-route buses, paratransit) for elderly and disabled persons and accessibility of such services by elderly and disabled persons.

- **CE-4.5** Encourage employers to reduce single-occupant vehicular trips by providing employee incentives (e.g., reduced rate transit passes).

- **CE-4.6** Require new development to provide transit facilities, such as bus shelters and turnouts, where deemed necessary, to encourage the use of transit and other alternative forms of transportation.

- **CE-4.7** Preserve options for expanding future transit use when designing improvements for roadways or redeveloping major developments and including areas for transit facilities.

- **CE-4.8** Encourage access to and the expansion of regional rail transportation facilities and services at the Metrolink stations to increase ridership.

- **CE-4.9** Encourage the development of bus rapid transit systems along major transportation corridors where feasible.

- **CE-4.10** Improve first/last mile connections to improve transit use and accessibility. Explore use of transportation network companies, micro-transit, and other emerging technologies to strengthen the transit system.

### *Bicycle and Pedestrian Facilities*

- **CE-5.1** Provide for safety of bicyclists, equestrians, and pedestrians by adhering to national standards and uniform practices; adhere to accessibility requirements for people with disabilities.

- **CE-5.2** Maintain existing pedestrian facilities and encourage new development to provide walkways between and through developments.

- **CE-5.3** Provide for safe accessibility to and use of pedestrian facilities by people with disabilities to implement accessibility requirements under the American with Disabilities Act.

- **CE-5.4** Develop bicycle routes in accordance with the City's adopted Bicycle Master Plan and implement other elements of that plan.

- **CE-5.5** Develop and maintain a bikeway system that provides connections to routes of neighboring jurisdictions and regional bikeways.

- **CE-5.6** Encourage new and existing development to provide accessible and secure areas for bicycle storage. Provide bicycle racks or storage facilities at public facilities and require bicycle parking, storage, and other support facilities as part of new office and retail developments.

- **CE-5.7** Use easements and/or rights-or-way along flood control channels, public utilities, railroads, and streets wherever possible for bikeways and equestrian and hiking trails.

- **CE-5.8** Improve bicycling and pedestrian safety by minimizing conflict points (e.g., bicycle and vehicle crossings) with motorized traffic, separating bike routes and truck routes where possible, or adding and improving existing facilities with buffers/barriers to separate bikes from vehicle lanes.

- **CE-5.9** Coordinate with the Riverside County General Plan and the Santa Ana River Trails Plan to create an uninterrupted Class I bicycle route through Corona that connects to the Santa Ana River Trail in surrounding cities.

- **CE-5.10** Encourage and support safe bicycle riding on City streets. Provide bicycle safety and education programs through public outreach. Support future bikeway designs that minimize bicycle conflicts with vehicles, separate bikeways from vehicles where possible, and lower bicycle level of stress.

### *Goods Movement*

- **CE-6.1** Provide primary truck routes on selected arterial streets that will serve the business community while minimizing the impacts of through truck traffic into residential areas.

- **CE-6.2** Provide appropriately designed and maintained roadways in accordance with local, state, and federal standards for truck routes so that they can safely accommodate truck travel.

- **CE-6.3** Develop appropriate treatments along local truck routes to minimize noise and vibration impacts on sensitive land uses that are adjacent to or impacted by the truck route.

- **CE-6.4** Ensure that new development provides adequate on-site truck loading facilities and enforce prohibition of queuing of trucks on public streets or in other areas not intended for such uses.

- **CE-6.5** Monitor traffic and safety crossing conditions at grade railroad crossings; support at-grade and grade-separated improvements, when warranted, to improve local commerce, flow of traffic, or safety.

- **CE-6.6** Strive to minimize through truck traffic in residential neighborhoods and other areas not intended for such travel, and enforce City codes that restrict or prohibit trucks on certain streets.

- **CE-6.7** Work closely with other agencies on implementing improvements along the BNSF Transcomm route to facilitate rail movements, minimize roadway congestion, and reduce impacts on City roadways.

## Environmental Resources Element

### *Air Resources*

- **ER-12.5** Increase public transit ridership by periodically adjusting local routes, where feasible, and working with regional transit providers serving Corona and its Planning Area.

- **ER-12.6** Support major commercial centers and employment center projects, having 100 or more employees, to incorporate transit amenities, access points, and van and carpool parking as part of the project.

- **ER-12.7** Increase the number of Park and Ride locations within the Planning Area to encourage carpooling and vanpooling.

- **ER-12.8** Require new commercial and industrial development and redevelopment projects of sufficient scale and number of employees to provide adequate facilities for bicycles, such as bicycle racks located close to the front entranceways of buildings and shower facilities with lockers.

- **ER-12.9** Continue to incorporate bicycle lanes in all new and upgrade roadway projects in order to encourage commuter bicycle trips. Also, improve existing bicycle lanes for greater user safety.

- **ER-12.10** Support mixed-use commercial-residential development and continue to target residential development within and near existing planned activity centers and transportation corridors to improve the City's current jobs-housing ratio and reduce the number of vehicle trips.

- **ER-12.11** Require that large-scale master-planned residential communities incorporate pedestrian and cycling paths/trails that link with adjacent neighborhoods, schools, areas of shopping and employment, community centers, other places of activity, and transit access points.

- **ER-12.12** Provide effective utility of pedestrian and cycling paths/trails and place strong limitations on intrusions into these rights-of-way used for pedestrian and bicycling.

- **ER-13.1** Maintain and periodically update a comprehensive Climate Action Plan that detail the City's strategies to reduce GHG emissions and to ensure ongoing and sustained reduction of GHG emissions from all sectors to meet 2020, 2030, and 2040 reduction targets.

- **ER-13.5** Increase use of clean fuel and electric vehicles in the city through the support of the installation of electric vehicle infrastructure; explore opportunities to incentivize and/or facilitate installation of electric vehicle charging stations at convenient locations in Corona.

- **ER-13.7** Support a wide variety of transportation related measures (e.g., active transportation, increased bus and rail transit, transportation system and demand management, etc.) as articulated in the Circulation Element to reduce the number of vehicle miles traveled in Corona.

### Parks, Recreation, Cultural Arts, and Education

#### *Multi-Use Trails*

- **PR-6.1** Strive to identify and connect multipurpose trails to schools, local and regional parks, residential neighborhoods, open space areas, downtown, bikeways, and other community destinations in Corona.

- **PR-6.2** Require new developments to provide access opportunities to trails that exist in their area or to proposed trails linking parks, recreational areas, neighborhoods, and other areas of high public concentration with a trail design suitable to the area or contribute improvements, dedications, or fees to extend trails.

- **PR-6.3** Encourage creation of a multipurpose trail system for hiking, biking, and equestrian use in areas commonly used for these purposes, such as along washes, creeks, drainages, hillsides, parks, and other public use areas.

- **PR-6.4** Cooperate with Riverside County in establishing and completing portions of the county's backbone trail system that crosses Corona.

- **PR-6.5** Ensure trails that navigate through residential neighborhoods are not obtrusive, invade the privacy of residents, or jeopardize the safety of neighborhoods.

- **PR-6.6** Locate, design, and regulate the use of multipurpose trails so that they reflect the character and environment where they are located and do not negatively impact natural habitat, wildlife, landforms, or cultural resources.

- **PR-6.7** Initiate and maintain dialogue with federal, state, and local governments to coordinate access and maintenance of trails that cross jurisdictional boundaries.

- **PR-6.8** Promote the safe use of trails and require infrastructure and other public rights-of-way to be designed and developed to accommodate trails in a manner that is safe and compatible with the intended primary use of the rights-of-way or easement, where feasible.

- **PR-6.9** Seek available funding for the maintenance and/or establishment of multi-use trails that accommodate bicycle and pedestrian users.

- **PR-6.10** Consider numerous outlets to make the city's Trails Master Inventory or Trails Master Plan and bicycle plan easily accessible to the public to increase public awareness.

- **PR-6.11** Promote the use of trails and bicycle routes through use of wayfinding signs or placards.

- **PR-6.12** Raise public awareness of the health benefits of walking and bicycling, the safe use of the streets and sidewalks, and the availability of trails, bicycle routes, and greenways.

- **PR-6.13** Encourage the establishment of various trail classifications in the City that are suited to the environmental context on which they are located and the intended purpose and use of the trail.

- **PR-6.14** Consider establishment of trail heads and/or staging areas with parking for newly created trails, to the extent feasible; and if the opportunity arises, incorporate trail heads and/or staging areas into existing trail areas.

## 5.17.4 Environmental Impacts

### 5.17.4.1 METHODOLOGY

#### Traffic Volume Forecasting

The CGPM was updated for use in developing future volume forecasts for this project. The CGPM is a derivative of the Riverside Traffic Analysis Model (RIVTAM). The original CGPM uses a 2008 Base Year and a 2035 Future Year and Socioeconomic Data (SED) consistent with the SCAG 2012 RTP model outside of the City of Corona, and SED consistent with the General Plan inside the City. As the current version of CGPM is not consistent with the 2016 SCAG RTP/SCS or the General Plan Update, the SED were reviewed for consistency with the 2016 RTP/SCS and General Plan land use assumptions in the study area and updated appropriately based on the comparison. Two model scenarios were utilized in the forecasting process: Existing (2017) and General Plan Horizon Year (2040).

Existing conditions was created by updating the 2008 Base Year CGPM network to show existing conditions (2017). Changes to the future network are consistent with the 2016 RTP/SCS. In the Existing Model, State Route 91 (SR-91) HOV lanes were modified to reflect the SR-91 Corridor Improvement Project that extended the tolled SR-91 Express Lanes in Orange County to Interstate 15. Toll lane entrances and exits were edited on the freeway links. Along SR-91, the Vicentia Avenue Ramp was removed from the network and the SR-91 Lincoln Avenue ramps were relocated from Lincoln Avenue to 2nd Street. The 2.5 mile Foothill Extension Project between Lincoln Avenue and Paseo Grande was added to the network as a four-lane road.

The General Plan Horizon (2040) Model roadway network was edited consistent with the Existing (2017) Model and adjusted further for future 2040 conditions, consistent with the SCAG 2016 RTP/SCS. 6th Street between West Grand Avenue and East Grand Avenue was modified to reflect the proposed downtown road typology (which includes a lane reduction).

#### Roadway Improvement Assumptions

##### *SCAG RTP Improvements*

The planned roadway improvements assumed in General Plan buildout conditions (2040) are consistent with improvements assumed in the SCAG 2016 RTP/SCS, and with adjacent development project plans. The following projects are assumed to be completed by 2040:

- **RTP ID RIV010208:** Widen Cajalco Road from Temescal Canyon Road to Bedford Canyon Road from two through lanes to six through lanes. This includes the design, reconstruction, and widening of the Interstate 15 (I-15) ramps along Cajalco Road. The southbound on-ramp will be reconstructed from one lane to two lanes and the I-15 southbound off ramp will be reconstructed from two lanes to five lanes. The I-15 northbound on-ramp will be reconstructed from one lane to two lanes and the I-15 northbound off ramp will be reconstructed from two lanes to four lanes. Axillary lanes will be added between the I-15 northbound and southbound ramps near El Cerrito Road.

- **RTP ID 3A04WT030:** Widen Main Street from south of East Grand Boulevard to Ontario Avenue from two lanes to four lanes.
- **RTP ID 3A04WT032:** Widen Railroad street from Sherman Avenue to Main Street at Grand Avenue from two lanes to four lanes.
- **RTP ID RIV071267:** Construct four toll express lanes (two in each direction) on I-15 between SR-60 to Hidden Valley Parkway and construct two tolled express lanes (one in each direction) from Hidden Valley Parkway to Cajalco Road.
- **RTP ID 3160001:** Construct two toll express lanes (one in each direction) on I-15 between Cajalco Road to SR-74.
- **RTP ID 3160002:** Construct two HOV lanes (one in each direction) on I-15 between SR-74 to Junction I-15/I-215.
- **RTP ID RIV011240:** Construct a grade separation on McKinley Street at BNSF Railroad crossing

### *WRCOG TUMF Improvements*

There are TUMF funded projects in Corona along Temescal Canyon Road and Ontario Avenue. The following improvements are assumed to be completed by 2040:

- Widen Temescal Canyon Road between 1st Street and El Cerritos Road to six lanes. Widen Temescal Canyon Road between El Cerrito Road to Interstate 15 ramps to four lanes.
- Widen Ontario Avenue between Interstate 15 ramps and El Cerritos Road from four lanes to six lanes

### *City of Corona Improvements*

The City of Corona is planning the following improvements to maintain acceptable level of service within the City:

- Implement a road diet on 6th Street that will reduce the number of travel lanes from four to two and will provide angled parking on both sides of the street. This will also convert north/south streets of Crawford Street, Merrill Street, Sheridan Street, Ramona Avenue, Victoria Avenue, Howard Street, Joy Street, and Fuller Street as one-way streets.
- Restripe the northbound approach on Smith Avenue of the 6th Street and Smith Avenue intersection to include two left-turn lanes and a shared through-right-turn lane.
- Design the northbound right-turn on 6th Street and Magnolia Avenue/Promenade Avenue as a free channelized right-turn lane.

- Restripe the southbound approach at Foothill Parkway and California Avenue to include a shared through-right and two left turn lanes.
- As conditioned by of a new development project, add an additional southbound left-turn lane on McKinley Street at the McKinley Street and Promenade Avenue intersection.
- Widen Ontario Avenue at I-15 to six lanes (Compton Avenue to State Street) as part of the I-15 interchange improvement project.

### VMT

The CGPM was used to estimate VMT. The VMT estimates incorporate the "full accounting" methodology, in that it accounts for the complete length of the trip from the origin to the destination and assigns 100 percent of that trip distance to the City of Corona.. VMT per service population (VMT/SP) estimates were modeled for the City and SOI. The Corona General Plan Update is not proposing any changes in land use across the City, including maintaining residential densities and intensities within general plan land uses. The TIA evaluated the changes in traffic volumes and operations resulting from the buildout of the general plan land use plan and roadway network.

### Delay

As identified previously, under SB 743, delay-based metrics may no longer constitute the sole basis for determining transportation impacts under CEQA. SB 743 does not preclude the application of local general plan policies, zoning codes, conditions of approval, or any other planning requirements that require evaluation of LOS. In accordance with the City's desire to maintain a safe efficient roadway system, Appendix M provides a traffic analysis for the General Plan Update that evaluates the LOS for major arterials in the City in accordance with Policy CE-1.6. The result of the analysis was used to develop the functional classification system on roadway network for the General Plan update (see Figure 5.17-1).

## 5.17.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.17-1: The Corona General Plan is consistent with adopted programs, plans, ordinances, and policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities in the City. [Threshold T-1]**

Pursuant to Section 21099(b)(2) of the Public Resources Code, "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment…" The City of Corona General Plan includes LOS policies to provide a sustainable roadway network in the City. The traffic impact analysis includes an evaluation of the how the proposed General Plan update affects the City's roadway network, based on the City of Corona's LOS policies identified in the General Plan in Section 5.2, *Intersection Operations Analysis*, and Section 5.3, Roadway

Segment Analysis (see Appendix M). However, these are not considered CEQA impacts pursuant to Section 21099(b)(2).

## General Plan

### *Consistency with Multimodal Circulation System Plans*

The City's transportation network has pedestrian, bicycle, and public transit facilities to support alternative modes of transportation (i.e., not personal automobile). Implementation of the proposed project would increase demand for public transit, bicycle, and pedestrian facilities, which would require the improvement and expansion of the circulation system. The Circulation Element includes policies that support public transit, bicycle improvements, and improvements to the pedestrian facilities by closing gaps in the network, expanding the network, and coordinating with regional agencies (see Policies CE-4.1 through CE-4.10 for transit and Policies CE-5.1 through CE-5.10 for bicycle and pedestrian facilities). Specific policies that further a multi-model circulation network include:

- **CE-4.6** Require new development to provide transit facilities, such as bus shelters and turnouts, where deemed necessary, to encourage the use of transit and other alternative forms of transportation.
- **CE-4.10** Improve first/last mile connections to improve transit use and accessibility. Explore use of transportation network companies, micro-transit, and other emerging technologies to strengthen the transit system.
- **CE-5.4** Develop bicycle routes in accordance with the City's adopted Bicycle Master Plan and implement other elements of that plan.
- **CE-5.9** Coordinate with the Riverside County General Plan and the Santa Ana River Trails Plan to create an uninterrupted Class I bicycle route through Corona that connects to the Santa Ana River Trail in surrounding cities.

These policies support implementation of Complete Streets, through a layered network approach, consistent with the State's Complete Streets Act. As such, they are consistent with the existing adopted policies, plans and programs regarding public transit, bicycle, or pedestrian facilities.

### *Consistency with SCAG's 2016 RTP/SCS*

The proposed General Plan's consistency with the 2016 SCAG Regional Transportation Plan/Sustainability Communities Strategy (RTP/SCS) is detailed in Section 5.11, *Land Use and Planning,* Table, 5.11-1, *SCAG's 2016–2040 RTP/SCS Consistency Analysis*. The goals of the RTP/SCS focus on transit, transportation and mobility, and protection of the environmental and health of residents.

### *Summary*

In summary, implementation of the proposed project would increase demand for public transit, bicycle, and pedestrian facilities, which would require the improvement and expansion of the circulation system. A review

of the Land Use Plan revealed no potential policy inconsistencies or conflicts with policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or the performance or safety of those facilities. The General Plan incorporates future networks and policies related to supporting transit, bicycle, and pedestrians in the City and SOI. These networks are consistent with regional and local planning efforts supporting these modes of travel. Additionally, the project has numerous policies supporting complete streets (providing accessibility for all users of all ages and abilities) and active transportation.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. Goal 7 of the Climate Action Plan directs the City to decrease GHG emissions by reducing VMT. The following measures in the CAP support this goal:

- **Measure 7.1 – Alternative Transportation Option**s. The CAP identifies potential strategies for the City to improve alternative transportation including:
  - Working with SCAG and the community to remove barriers to alternative transportation.
  - Creating additional active transportation routes from the Corona Transit Center to surrounding residential areas.
  - Evaluating parking requirements to identify areas, such as transit districts and mixed-use developments, for shared or reduced parking requirement opportunities.
- **Measure 7.2 – Implement Bicycle Master Plan to Expand Bicycle Routes Around the City**. The CAP identifies potential improvements to the City's bicycle plan, including:
  - Expanding bicycle routes and prioritizing funding for Class 1 bicycle lanes to improve bicycle transit.

The Climate Action Plan measures would encourage use of alternative modes of transportation and overall reduce trips and associated VMT. Consequently, implementation of the City's Climate Action Plan would result in beneficial impacts to traffic.

**Impact 5.17-2: Project-related trip generation in combination with existing and proposed cumulative development would result in designated road and/or highways exceeding the Congestion Management Agency service standards. [Threshold T-1]**

### General Plan

#### *Consistency with RCTC's CMP*

Forecast traffic volumes, lane configurations, and signal timings were used to evaluate operations at the study intersections for the General Plan Horizon Year (2040) AM and PM peak hour conditions (see also Appendix M). Table 5.17-7, *CMP Consistency Analysis*, identifies traffic impacts at CMP intersections in the City and SOI

(see Table 5-1 in Appendix M for a list of the LOS at study area intersections). Traffic generated by General Plan Buildout conditions plus the traffic generated by regional growth would contribute to the existing congestion of I-15 and SR-91; and therefore, would conflict with the Riverside County CMP for the following intersections:

- #22. El Cerrito Road and I-15 Southbound Ramps (PM peak hour)
- #23. El Cerrito Road and I-15 Northbound Ramps (AM peak hour)

Table 5.17-7 CMP Consistency Analysis

| Intersection | Jurisdiction | Peak Hour | Existing | | Project | | Delay Change | Impact? |
|---|---|---|---|---|---|---|---|---|
| | | | Delay | LOS | Delay | LOS | | |
| 22. El Cerrito Rd and I-15 SB Ramps | Caltrans | AM | 25 | C | 33 | C | 8 | No |
| | | PM | 11 | B | 132 | F | 121 | Yes |
| 23. El Cerrito Rd & I-15 NB Ramps | Caltrans | AM | 30 | C | 103 | F | 73 | Yes |
| | | PM | 19 | B | 36 | D | 17 | No |

Source: Fehr and Peers 2019c
Notes: SB: southbound; NB: northbound.
Bold/Shaded = exceeds RCTC CMP threshold of LOS "F"

## Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The Climate Action Plan measures 7.1 and 7.2 would encourage use of alternative modes of transportation and overall reduce trips and associated VMT. Consequently, implementation of the City's Climate Action Plan would result in beneficial impacts to traffic.

**Impact 5.17-3: Project-related trip generation in combination with existing and proposed cumulative development would exceed the City's VMT threshold and would be inconsistent with CEQA Guidelines § 15064.3, subdivision (b). [Threshold T-2]**

## General Plan

Throughout southern California, it is increasingly recognized that it may not be feasible to simply "build our way out" of traffic congestion and impacts. A multimodal approach to solving transportation solutions is required. A key element of the approach is to reduce the number of vehicles using the freeway and roadway systems and to reduce VMT. This may be accomplished by eliminating some trips via transit or carpooling, consolidating other trips, and making the trip length shorter through efficient land use planning. The CPGM travel demand forecasting model was used to estimate VMT for the existing conditions, the Current General Plan, and the proposed project.

### *Project Level Analysis*

The City of Corona has adopted a threshold of a no net increase in VMT compared to existing conditions. Table 5.17-8, *Project-Level VMT/SP Analysis*, identifies that the City and SOI are anticipated to have a VMT/SP of 32.6. This is 2.4 VMT/SP higher than existing conditions, which has a VMT/SP of 30.32. The primary reason for the increase in VMT/SP compared to existing conditions is that much of the planned growth is in the outlying areas of the City rather than in the City center, which is already built out, and in the Temescal Canyon Planning Area.

**Table 5.17-8 Project-Level VMT/SP Analysis**

| Scenario | Existing | | Project | | Change | |
|---|---|---|---|---|---|---|
| | Total VMT | Existing VMT/SP | Total VMT | Project VMT/SP | Total VMT | VMT/SP |
| City of Corona | 7,093,655 | 30.0 | 8,674,797 | 32.3 | 1,581,142 | 2.3 |
| SOI | 1,295,079 | 31.1 | 2,702,890 | 33.8 | 1,407,811 | 2.7 |
| Total City + SOI | 8,385,277 | 30.2 | 11,366,074 | 32.6 | 2,980,797 | 2.4 |

Source: Fehr and Peers 2019b

### *Cumulative Analysis*

The City of Corona has adopted a threshold of a no net increase in VMT compared to the current General Plan as the cumulative impact criteria. Since the Current General Plan and proposed General Plan Update have the same land use assumptions, the only differences in the scenarios are the road diet on 6th Street, which reduces the number of lanes on 6th Street from four to two in the proposed project.

Table 5.17-9, *Cumulative VMT/SP Analysis*, identifies that the project would result in a slight (0.03 percent) increase in VMT/SP compared to the current General Plan. The results of the modeling estimates indicate that vehicles are selecting a slightly longer path of travel given the lane reduction in capacity on 6th Street. The relatively small increase in VMT is consistent with the relatively small decrease in lane miles (the 1.75 lane mile reduction on 6th Street is 0.3 percent of the total lane miles within the model in the City of Corona and 0.002 percent of the total lane miles in the SCAG region). These results are contrary to the theory of induced travel which has found a significant relationship with increasing highway capacity corresponding to increases in VMT. It follows that a reduction in capacity should yield a reduction in VMT for the region. Given the geographic scale of the SCAG region in the CGPM, it is unlikely that the model is sensitive enough to account for effects of induced travel to be accurately reflected in these VMT estimates. The increase in VMT forecasted is within the model standard error and is likely negligible. However, cumulative impacts are conservatively considered significant because the model results show an increase compared to the current General Plan.

Table 5.17-9 Cumulative VMT/SP Analysis

| Scenario | Current General Plan | | Project | | Change | |
|---|---|---|---|---|---|---|
| | Total VMT | Existing VMT/SP | Total VMT | Project VMT/SP | Total VMT | VMT/SP |
| City of Corona | 8,672,884 | 32.3 | 8,674,797 | 32.3 | 1,913 | <0.1 |
| SOI | 2,701,420 | 33.8 | 2,702,890 | 33.8 | 1,470 | <0.1 |
| Total City + SOI | 11,362,777 | 32.6 | 11,366,074 | 32.6 | 3,297 | <0.1 |

Source: Fehr and Peers 2019b

## Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The Climate Action Plan measures 7.1 and 7.2 would encourage use of alternative modes of transportation and overall reduce trips and associated VMT. Consequently, implementation of the City's Climate Action Plan would result in beneficial impacts to traffic.

**Impact 5.17-4: Circulation improvements associated with future development that would be accommodated by the General Plan Update would be designed to adequately address potentially hazardous conditions (sharp curves, etc.), potential conflicting uses, and emergency access. [Threshold T-3 and T-4]**

## General Plan

Buildout of the General Plan would involve the alteration, intensification, and redistribution of land uses in the unincorporated County. The Circulation Plan includes circulation network improvements. These improvements would be subject to review and future consideration by the City's Public Works engineering staff. An evaluation of the roadway alignments, intersection geometrics, and traffic control features would be needed. Roadway improvements would have to be made in accordance with the City's circulation plan and roadway design guidelines and meet design guidelines in the California Manual of Uniform Traffic Control Devices and the Caltrans Roadway Design Manual. In addition, the Circulation Element includes policies to improve the safety of all users of the transportation system:

- **CE-1.4** Design and employ traffic control measures to ensure City streets and roads function with safety and efficiency.
- **CE-5.1** Provide for safety of bicyclists, equestrians, and pedestrians by adhering to national standards and uniform practices; adhere to accessibility requirements for people with disabilities.
- **CE-5.3** Provide for safe accessibility to and use of pedestrian facilities by people with disabilities to implement accessibility requirements under the American with Disabilities Act.

- **CE-5.8** Improve bicycling and pedestrian safety by minimizing conflict points (e.g., bicycle and vehicle crossings) with motorized traffic, separating bike routes and truck routes where possible, or adding and improving existing facilities with buffers/barriers to separate bikes from vehicle lanes.

- **CE-6.5** Monitor traffic and safety crossing conditions at grade railroad crossings; support at-grade and grade-separated improvements, when warranted, to improve local commerce, flow of traffic, or safety.

- **CE-6.6** Strive to minimize through truck traffic in residential neighborhoods and other areas not intended for such travel, and enforce City codes that restrict or prohibit trucks on certain streets.

- **ER-12.9** Continue to incorporate bicycle lanes in all new and upgrade roadway projects in order to encourage commuter bicycle trips. Also, improve existing bicycle lanes for greater user safety.

- **LU-12.9** Require that heavy truck and vehicle access for industrial land uses be effectively placed and managed to ensure that it is safe and efficient for the present use and that it minimizes noise, odor, vibration, traffic, queuing back onto streets or existing or adjacent properties, and other safety impacts on adjoining uses.

- **LU-17.25** Repair, upgrade, and maintain the quality of public streets and sidewalks in the Downtown to encourage pedestrian activity, improve roadway safety, and beautify streets.

Implementation of the General Plan Update would not result in hazardous conditions, create conflicting uses, or cause a detriment to emergency vehicle access.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The Climate Action Plan measure 7.1 and 7.2 would encourage use of alternative modes of transportation and overall reduce trips and associated VMT. Consequently, implementation of the City's Climate Action Plan would result in beneficial impacts to traffic.

## 5.17.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.17-1 and 5.17-4.

Without mitigation, the following impacts would be **potentially significant**:

- **Impact 5.17-2** Buildout of the General Plan Update would result in intersections that exceed the Riverside County Transportation Commission's Congestion Management Agency service standards.

- **Impact 5.17-3** Buildout of the General Plan would result in project-level and cumulative VMT impacts

## 5.17.6 Mitigation Measures

### Impact 5.17-2

The following mitigation measures were considered but were rejected because these intersections are within Caltrans jurisdiction and the City cannot guarantee that this improvement will be implemented:

- In order to achieve the RCTC's CMP standards for El Cerrito Road at the I-15 southbound ramps, the I-15 southbound off-ramp would need to be widened to increase the number of lanes to three lanes. This intersection requires that the southbound off-ramp be widened to contain one shared through-left lane and two right-turn lanes.

- In order to achieve the RCTC's CMP standards for El Cerrito Road at the I-15 northbound ramps, the I-15 northbound off-ramp would need to be widened to increase the number of lanes to two lanes. This intersection requires that the northbound on-ramp be widened to contain one left-turn lane and one shared left-through-right lane turn lane.

### Impact 5.17-3

T-1 The City shall consider the following implementation programs to reduce citywide VMT:

- **VMT exchange program.** VMT generators can select from a pre-approved list of mitigation projects that may be located within the same jurisdiction or possibly from a larger area. The intent is to match the project's needed VMT reduction with a specific mitigation project of matching size and to provide evidence that the VMT reduction will reasonably occur.

- **VMT Mitigation Bank**. A mitigation bank is intended to serve as an entity or organization that pools fees from development projects across multiple jurisdictions to spend on larger scale mitigation projects. This concept differs from the more conventional impact fee program approach described above in that the fees are directed to a few larger projects that have the potential for a more significant reduction in VMT and the program is regional in nature.

## 5.17.7 Level of Significance After Mitigation

### Impact 5.17-2

The traffic analysis identified improvements to the I-15 ramps at El Cerrito Road that would improve traffic conditions to achieve the RCTC's CMP standard of LOS "F" to ensure consistency with the RCTC CMP. However, intersection #22 (El Cerrito Road at the I-15 southbound ramps) and #23 (El Cerrito Road at the I-15 northbound ramps) are within Caltrans jurisdiction and the City cannot guarantee that this improvement

will be implemented. Therefore, Impact 5.17-2 impacts associated with consistency with the RCTC's CMP are considered **significant and unavoidable**.

### Impact 5.17-3

Implementation of the General Plan Update would result in an increase in VMT from existing conditions and compared to the Current General Plan. Future development projects consistent with the General Plan would need to consider transportation demand management (TDM) consistent with those identified in the Circulation Element. TDM techniques include incentives to use transit; incentives to form carpools rather than to drive alone; and making home, work, and shopping closer together to shorten travel distances. Mitigation Measure T-1 would require the City to consider a VMT offset program, such as a VMT exchange or VMT mitigation bank to offset any increase project-level VMT generate by a project. Because the effectiveness of TDM measures included in the General Plan and the feasibility of a VMT offset program in Mitigation Measure T-1 has not been determined, project and cumulative impacts under Impact 5.17-3 are considered **significant and unavoidable**.

## 5.17.8 References

Fehr & Peers. 2019a, January 11. Draft City of Corona CEQA Assessment – VMT Analysis Guidelines.

_____. 2019b, March 27. Corona General Plan VMT Assessment.

_____. 2019c, July. Transportation Impact Study. Corona General Plan Update.

# 5.18 TRIBAL CULTURAL RESOURCES

Tribal cultural resources include landscapes, sacred places, or objects with cultural value to a California Native American tribe. This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the City of Corona General Plan Technical Update Plan (proposed project) to impact tribal cultural resources in the City of Corona. Other potential impacts to cultural resources (i.e., prehistoric, historic, paleontological, and disturbance of human remains) are evaluated in Section 5.5, *Cultural Resources.* The analysis in this section is based, in part, upon the following information:

- *City of Corona General Plan Update: Cultural Resources Technical Report,* SWCA Environmental Consultants, December 2018

A complete copy of this report is included as Appendix F to this DEIR. Additionally, a compilation of Senate Bill 18 (SB 18)/Assembly Bill 52 (AB 52) tribal consultation letter correspondences received by the City from Native American tribes is provided in Appendix O.

## 5.18.1 Environmental Setting

### 5.18.1.1 REGULATORY FRAMEWORK

#### Federal

##### *Archaeological Resources Protection Act*

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites which are on Federal lands and Indian lands.

##### *Native American Graves Protection and Repatriation Act*

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants and culturally affiliated Indian tribes.

#### State

##### *California Public Resources Code*

Archaeological resources are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code. In addition, cultural resources are recognized as a nonrenewable resource and therefore receive protection under the California Public Resources Code and CEQA.

- California Public Resources Code 5097.9–5097.991 provides protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification of discoveries of Native American human

remains, descendants and provides for treatment and disposition of human remains and associated grave goods.

### *California Health and Safety Code*

The discovery of human remains is regulated by California Health and Safety Code Section 7050.5, which states that:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation…until the coroner…has determined…that the remains are not subject to…provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible…. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and…has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

### *California Senate Bill 18*

Existing law provides limited protection for Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places. These places may include sanctified cemeteries, religious, ceremonial sites, shrines, burial grounds, prehistoric ruins, archaeological or historic sites, Native American rock art inscriptions, or features of Native American historic, cultural, and sacred sites.

Senate Bill 18 was signed into law in September 2004 and went into effect on March 1, 2005. It places new requirements upon local governments for developments within or near "traditional tribal cultural places" (TTCP). Per SB 18, the law requires local jurisdictions to provide opportunities for involvement of California Native Americans tribes in the land planning process for the purpose of preserving traditional tribal cultural places. The Final Tribal Guidelines recommends that the NAHC provide written information as soon as possible but no later than 30 days to inform the lead agency if the proposed project is determined to be in proximity to a TTCP and another 90 days for tribes to respond to a local government if they want to consult to determine whether the project would have an adverse impact on the TTCP. There is no statutory limit on the consultation duration. Forty-five days before the action is publicly considered by the local government council, the local government refers action to agencies, following the CEQA public review time frame. The CEQA public distribution list may include tribes listed by the NAHC who have requested consultation or it may not. If the NAHC, the tribe, and interested parties agree upon the mitigation measures necessary for the proposed project, they would be included in the project's EIR. If both the City of Corona and the tribe agree that adequate mitigation or preservation measures cannot be taken, neither party is obligated to take action.

Per SB 18, a city or county is required to consult with the NAHC and any appropriate Native American tribe prior to the adoption, revision, amendment, or update of a city's or county's general plan. Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific

plans, the Final Tribal Guidelines advises that SB 18 requirements extend to specific plans as well, because state planning law requires local governments to use the same process for amendment or adoption of specific plans as general plans (defined in Government Code § 65453). In addition, SB 18 provides a new definition of TTCP requiring a traditional association of the site with Native American traditional beliefs, cultural practices, or ceremonies or the site must be shown to actually have been used for activities related to traditional beliefs, cultural practices, or ceremonies. (Previously, the site was defined to require only an association with traditional beliefs, practices, lifeways, and ceremonial activities.) In addition, SB 18 law also amended Civil Code Section 815.3 and adds California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places.

### *Assembly Bill 52*

AB 52 took effect July 1, 2015, and requires inclusion of a new section in CEQA documents titled Tribal Cultural Resources (TCR), which includes heritage sites. Under AB 52, a tribal cultural resource is defined in a similar way to tribal cultural places under SB 18—sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. Or the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a tribal cultural resource.

Similar to SB 18, AB 52 requires consultation with tribes at an early stage to determine whether the project would have an adverse impact on the TCR and mitigation to protect them. Per AB 52, within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it. The tribe then has 30 days of receiving the notification to respond if it wishes to engage in consultation. The lead agency must initiate consultation within 30 days of receiving the request from the tribe. Consultation concluded when both parties have agreed on measures to mitigate, or avoid a significant effect to a tribal cultural resource, or a party, after a reasonable effort tin good faith, decides that mutual agreement cannot be reached. Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on tribal cultural resources and discuss feasible alternatives or mitigation that avoid or lessen the impact.

## 5.18.1.2 EXISTING CONDITIONS

### Native American Heritage Commission

A scared lands file search conducted by the Native American Heritage Commission (NAHC) for the project site. The NAHC identified 31 local Native American representatives from the following Native American groups as potentially having local knowledge:

- Agua Caliente Band of Cahuilla Indians
- Augustine Band of Cahuilla Mission Indians
- Cabazon Band of Mission Indians
- Cahuilla Band of Indians
- Gabrieleno Band of Mission Indians – Kizh Nation

- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrielino Tongva Indians of California Tribal Council
- Juaneno Band of Mission Indians Acjachemen Nation – Belardes
- La Jolla Band of Luiseno Indians
- Los Coyotes Band of Mission Indians
- Morongo Band of Mission Indians
- Pala Band of Mission Indians
- Pauma Band of Luiseno Indians – Pauma and Yuima Reservation
- Pechanga Band of Mission Indians
- Ramona Band of Cahuilla Mission Indians
- Rincon Band of Mission Indians
- San Fernando Band of Mission Indians
- Santa Rosa Band of Mission Indians
- Soboba Band of Luiseno Indians
- Torres-Martinez Desert Cahuilla Indians

## Cultural Setting

### *Prehistoric*

Traditional models of California's prehistory hypothesize that the coastline was populated by Native Americans from the interior of North America during the end of the last Ice Age.

Moreover, the Chumash Tradition, Takic Tradition (formerly "Shoshonean"), and Yuman Tradition are represented in the Late Prehistoric period. Most of the rock art found in the Chumash sphere is thought to date to the Late Prehistoric Period.

The Chumash Tradition is present mainly in the region of Santa Barbara and Ventura Counties; the Takic or Numic Tradition in the Los Angeles, Orange, and western Riverside Counties region; and the Yuman Tradition in the San Diego region. The changes in material culture, burial practices, and subsistence focus at the beginning of the Late Prehistoric period are considered the result of a migration to the coast of peoples from inland desert regions to the east. In addition to the small triangular and triangular side-notched points similar to those found in the desert regions in the Great Basin and Lower Colorado River, Colorado River pottery and the introduction of cremation in the archaeological record are diagnostic of the Yuman Tradition in the San Diego region. This combination certainly suggests a strong influence from the Colorado Desert region.

In Los Angeles, Orange, and western Riverside Counties, similar changes (introduction of cremation, pottery, and small triangular arrow points) are considered the result of a Takic migration to the coast from inland desert regions. This Takic or Numic Tradition was formerly referred to as the "Shoshonean wedge" or "Shoshonean intrusion." This terminology, used originally to describe a Uto-Aztecan language group, is generally no longer used in order to avoid confusion with ethnohistoric and modern Shoshonean groups who spoke Numic languages. Modern Gabrielino, Juaneño, and Luiseño in this region are considered the

descendants of the prehistoric Uto-Aztecan, Takic-speaking populations that settled along the California coast during this period, or perhaps somewhat earlier.

### *Historic*

Spain began the colonization and inland exploration of Alta California with a band of soldiers, missionaries, Baja California Native Americans, and Mexican civilians. Near-coastal locations were preferred by the Spaniards for colonization because they were easier to defend and supply from ships, and were also bordered by populous Native American villages. The missions contained churches, workshops, storehouses, soldiers' barracks, and quarters for Native American neophytes. At the missions, the padres exercised strict control over the Native American neophytes, and oversaw all economic activities of Spanish California, particularly directing agricultural activities and nearly all related commercial activity.

The location the padres chose for Mission San Juan Capistrano was a coastal valley where the Elsinore Mountains meet the Pacific Ocean, within the territory of the Juaneño, the same Native American group that held Lake Elsinore at the time of European contact. The name Juaneño denotes the Mission San Juan Capistrano community of missionized Native Americans and their descendants. Spanish efforts to colonize and evangelize were continued by Mission San Luis Rey, which was established in 1798. The Luiseño—a Native American group closely related to and geographically adjacent to the Juaneño—derive their name from Mission San Luis Rey.

A major emphasis during the Spanish period in California was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Extensive land grants were established in the interior during the Mexican period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. At the same time, the influence of the California missions decreased in the late 1820s through the early 1830s. This decline resulted from a combination of outside events and pressures, including increasing hostility between missionaries and local civilians who demanded mission lands, decimation of the Native American population by introduced diseases, and the influence of private traders in the hide and tallow industry. Further, although earlier secularization schemes had called for redistribution of lands to Native American neophytes, who were responsible for the construction of the mission empire, the mission lands and livestock holdings were instead redistributed by the Mexican government through several hundred land grants to non–Native American ranchers.

The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities. Large numbers of Native Americans in the Central Valley, for example, died from disease between 1830 and 1833, and disease exterminated whole tribes along the American, Merced, Tuolumne, and Yuba Rivers. The Central Valley was hit by a second epidemic in 1837, which further decimated indigenous Californians.

### Ethnographic Overview

The City of Corona and the SOI occupy a transitional zone among the Gabrielino, Juaneño, and Cahuilla. These three Native American groups are speakers of Takic languages, which are part of the Uto-Aztecan linguistic stock.

#### *Gabrielino*

The City of Corona is located within the Gabrielino territory; surrounding native groups include the Chumash and Tatataviam/Alliklik to the north, the Serrano to the east, and the Luiseño/Juaneño to the south. The Gabrielino established large, permanent villages in the fertile lowlands along rivers and streams and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean.

#### *Juaneño/Acjachemen*

The City of Corona is located northwest of the border of the traditional Juaneño territory, which was surrounded by the Luiseño to the south, the Gabrielino to the north, and the Cahuilla to the west. The Juaneño resided in permanent, well-defined villages and associated seasonal camps.

#### *Cahuilla*

The City of Corona is situated southwest of traditional Cahuilla territory, which encompassed a large area and was bordered by 11 other Native American groups. Evidence suggests that the Cahuilla migrated to southern California about 2,000 to 3,000 years ago, most likely from the southern Sierra Nevada ranges of east-central California with other related sociolingusitic (Takic speaking) groups. The Cahuilla settled in a territory that extended west to east from the present-day City of Riverside to the center portion of the Salton Sea in the Colorado Desert, and south to north from the San Jacinto Valley to the San Bernardino Mountains.

#### *Native American Villages Near the Project Area*

The closest ethnographically documented village to the General Plan area is known as Paxangna. Some researchers state the village was located along the Temescal Creek, while others state the village was farther south.

## 5.18.2 Thresholds of Significance

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

TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, 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:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

## 5.18.3 Relevant General Plan Policies

The following are relevant policies from the Historic Resources Element of the Corona General Plan Update, which may contribute to reduce potential tribal cultural resources impacts as a result of implementation of the proposed General Plan Update.

### Historic Resources Element

- **HR-3.1** Require appropriate treatment/preservation of archaeological collections in a culturally HR-3.1 Require appropriate treatment/preservation of archaeological collections in a culturally appropriate manner, in accordance with state and federal standards, and in consultation with interested Native American tribes that have traditional cultural affiliation with the project area and/or the resources affected by the project.

- **HR-3.2** Require that development proposals incorporate specific measures to identify, protect, and preserve cultural resources in the planning, environmental review, and development process.

- **HR-3.3** Archaeological resources found prior to or during construction shall be evaluated by a qualified archaeologist and appropriate mitigation measures applied, pursuant to § 21083.2 of CEQA, before the resumption of development activities. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the appropriate CHRIS information center.

- **HR-3.4** Any project that involves earth-disturbing activities in an area determined to be archaeologically or culturally sensitive shall require evaluation of the site by a qualified archaeologist. The applicant shall implement the recommendations of the archaeologist, subject to the approval of the City. Planning Department.

- **HR-3.5** Any project that involves earth-disturbing activities in an area determined to be archaeologically or culturally sensitive shall require consultation by the applicant with interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, for the purposes of determining resources impacts and appropriate mitigation to address such impacts. Applicant shall also arrange for monitoring of earth-

disturbing activities by interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, if requested.

- **HR-3.8** In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area shall be protected and the project applicant immediately shall notify the Riverside County Coroner and comply with provisions of the Health and Safety Code § 7050.5, including PRC § 5097.98, if applicable. If the find is determined to be Native American human remains, the applicant shall consult with the Most Likely Descendent to determine appropriate treatment for such remains.

## 5.18.4 Environmental Impacts

### 5.18.4.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.18-1: The project could impact tribal cultural resources within the project area. [Threshold TCR-1]**

Conducting consultation early in the CEQA process allows tribal governments, public lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process.

#### General Plan

##### *Sacred Lands File Search and Consultation*

Chapter 5.5, *Cultural Resources*, identifies the 70 previously recorded resources within the City of Corona (including 30 prehistoric resources) and 86 resources in the City's SOI (including 74 prehistoric resources). On February 26, 2018, a Sacred Lands File search was conducted by NAHC to determine if any sacred lands or traditional cultural properties had been identified near the project site. The NAHC response identified potential sites recorded in the project area that could be impacted by the proposed project and suggested contacting the Gabrieleño/Tongva Band of Mission Indians, the Juaneno Band of Mission Indians–Acjachemen Nation, and the Pechanga Band of Luiseño Indians for additional information. The NAHC also provided a list of 31 Native American groups and individuals who may have knowledge of tribal cultural resources in the project area. Tribal consultation letters were sent by the City to these tribes on August 16, 2018, via certified mail, as described below.

##### *SB 18 and AB 52 Consultation*

In accordance with AB 52 and SB 18 requirements, the City sent invitation letters to representatives of the Native American contacts provided by the NAHC on August 16, 2018, formally inviting tribes to consult with the City on the General Plan Update. The intent of the consultations is to provide an opportunity for interested Native American contacts to work together with the City during the project planning process to

identify and protect tribal cultural resources. Response letters were received from the following tribes (see Appendix O).

- ***Soboba Band of Luiseño Indians.*** The Soboba Band of Luiseño Indians requested formal consultation on September 19, 2018, and requested a copy of the Cultural Resources Report. A copy of the Cultural Resources Report was provided to the tribe on September 20, 2018. As requested, the City of Corona consulted with the Soboba Band of Luiseño Indians on September 25, 2019, at 3:00 PM via phone. The tribe requested mitigation related to archaeological monitoring, treatment and disposition of cultural resources, and discovery of human remains. Mitigation has been included in Section 5.18.7, *Mitigation Measures*, to address their concerns. The consultation concluded with the tribe requesting the draft goals and policies related to tribal cultural resources. The draft goals and policies were sent to the tribe via email on October 16, 2019.

- ***Gabrieleño Band of Mission Indians – Kizh Nation.*** The Gabrieleño Band of Mission Indians – Kizh Nation (Kizh Nation) requested formal consultation on August 29, 2018. A copy of the Cultural Resources Report was provided to the tribe on September 20, 2018. As requested, the City of Corona consulted with the Kizh Nation via email and phone in September 2018. The tribe provided education materials disabusing us of the use of the term "Tongva" and mitigation for the treatment of tribal cultural resources. The consultation concluded with the tribe requesting mitigation related to archaeological monitoring, treatment and disposition of cultural resources, and discovery of human remains, which has been included in Section 5.18.7, *Mitigation Measures*. The draft goals and policies on cultural resources were sent to the tribe via email on October 16, 2019.

- ***Pechanga Band of Luiseño Indians.*** The Pechanga Band of Luiseño Indians requested formal consultation on September 5, 2018. A copy of the Cultural Resources Report was provided to the tribe on September 20, 2018. As requested, the City of Corona consulted with the Pechanga Band of Luiseño Indians via phone on October 11, 2018. The consultation concluded with the tribe requesting the draft goals and policies related to tribal cultural resources. The draft goals and policies for cultural resources were sent to the tribe via email on October 16, 2019.

- ***Agua Caliente Band of Cahuilla Indians.*** The Agua Caliente Band of Cahuilla Indians responded on August 24, 2018, that the City is not within the tribe's traditional use area, and therefore defers to other tribes in this area.

- ***Augustine Band of Cahuilla Indians.*** The Augustine Band of Cahuilla Indians responded on August 23, 2018, stating that they are unaware of specific cultural resources within the plan area. The tribe encouraged the City to contract with a Native American monitor to be present during preconstruction and construction phases of the project.

Future development as a result of the implementation of the General Plan Update could include grading in portions of the City and SOI with sensitivity to tribal cultural resources. Grading and construction activities of undeveloped areas or redevelopment that requires more intensive soil excavation than in the past could

potentially cause disturbance to tribal cultural resources. Therefore, future development could potentially unearth previously unknown/unrecorded tribal cultural resources.

The General Plan Update includes policies that have the potential to reduce impacts of potential development on tribal cultural resources, such as:

- **HR-3.3** Archaeological resources found prior to or during construction shall be evaluated by a qualified archaeologist and appropriate mitigation measures applied, pursuant to § 21083.2 of CEQA, before the resumption of development activities. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the appropriate CHRIS information center.

- **HR-3.5** Any project that involves earth-disturbing activities in an area determined to be archaeologically or culturally sensitive shall require consultation by the applicant with interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, for the purposes of determining resources impacts and appropriate mitigation to address such impacts. Applicant shall also arrange for monitoring of earth-disturbing activities by interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, if requested.

Draft policies in the Historic Resources Element were provided to the Soboba Band of Luiseño Indians, Gabrieleño Band of Mission Indians – Kizh Nation, and Pechanga Band of Luiseño Indians on October 16, 2019 via email. The General Plan Update is a regulatory document that sets the framework for future growth and development in the City and does not result in development in and of itself. Before any development or redevelopment activities can occur, they must be analyzed for conformance with the General Plan and other local, state, and federal requirements, and they must comply with the requirements of CEQA. While policies in the General Plan Update would minimize impacts to tribal cultural resources from new development and/or redevelopment, ground-disturbing activities have the potential to impact tribal cultural resources in the City and SOI.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect tribal cultural resources in the City or SOI. Consequently, implementation of the City's Climate Action Plan would result in less than significant impacts to local tribal cultural resources ordinances.

## 5.18.5 Existing Regulations and Standard Conditions

### Federal

- Archaeological Resources Protection Act
- Native American Graves Protection and Repatriation Act

### State

- California Public Resources Code Sections 5079–5079.65
- California Senate Bill 18
- Assembly Bill 52

## 5.18.6 Level of Significance Before Mitigation

Without mitigation, the following impacts would be **potentially significant:**

- **Impact 5.18-1** Tribal cultural resources could be adversely impacted by grading activities associated with the proposed project.

## 5.18.7 Mitigation Measures

### Impact 5.18-1

Mitigation Measure CUL-5 from Section 5.5, Cultural Resources, for archeological resources is also applicable to tribal cultural resources.

TCR-1 **Tribal Cultural Resources Monitoring**. The project archaeologist, in consultation with interested tribes, the developer and the City of Corona, shall develop an Archaeological Monitoring Plan (AMP) to address the details, timing and responsibility of archaeological and cultural activities that will occur on the project site. Details in the AMP shall include:

1. Project-related ground disturbance (including, but not limited to, brush clearing, grading, trenching, etc.) and development scheduling;

2. The development of a rotating or simultaneous schedule in coordination with the developer and the project archeologist for designated Native American Tribal Monitors from the consulting tribes during grading, excavation and ground disturbing activities on the site: including the scheduling, safety requirements, duties, scope of work, and Native American Tribal Monitors' authority to stop and redirect grading activities in coordination with all project archaeologists (if the tribes cannot come to an agreement on the rotating or simultaneous schedule of tribal monitoring, the Native American Heritage Commission shall designate the schedule for the onsite Native American Tribal Monitor for the proposed project);

3. The protocols and stipulations that the developer, City, Tribes and project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

At least 30-days prior to application for a grading permit and before any brush clearance, grading, excavation and/or ground disturbing activities on the site take place, the future

developer shall retain a tribal cultural monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources.

Pursuant to the AMP, a tribal monitor from the consulting tribe (e.g., Pechanga Band of Luiseño Indians, Soboba Band of Luiseño Indians, or Gabrieleño Band of Mission Indians – Kizh Nation) shall be present during the initial grading activities. If tribal resources are found during grubbing activities, the tribal monitoring shall be present during site grading activities.

TCR-2 **Treatment and Disposition of Cultural Resources.** In the event that Native American cultural resources are inadvertently discovered during the course of any ground disturbing activities, including but not limited to brush clearance, grading, trenching, etc. grading for the proposed project, the following procedures will be carried out for treatment and disposition of the discoveries:

1. Temporary Curation and Storage: During the course of construction, all discovered resources shall be temporarily curated in a secure location onsite or at the offices of the project archaeologist. The removal of any artifacts from the project site will need to be thoroughly inventoried with tribal monitor oversite of the process; and

2. Treatment and Final Disposition: The landowner(s) shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources. The applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Corona with evidence of same:

    a. Accommodate the process for onsite reburial of the discovered items with the consulting Native American tribes or bands. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing, basic analysis, and other analyses as recommended by the project archaeologist and approved by consulting tribes and basic recordation have been completed; all documentation should be at a level of standard professional practice to allow the writing of a report of professional quality;

    b. A curation agreement with an appropriate qualified repository within San Bernardino County that meets federal standards per 36 CFR Part 79 and therefore would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Bernardino County, to be accompanied by payment of the fees necessary for permanent curation;

c. For purposes of conflict resolution, if more than one Native American tribe or band is involved with the project and cannot come to an agreement as to the disposition of cultural materials, they shall be curated at the San Bernardino County Museum by default;

d. At the completion of grading, excavation and ground disturbing activities on the site, a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the project archaeologist and Native Tribal Monitors within 60 days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. All reports produced will be submitted to the City, County Museum, and consulting tribes.

TCR-3 During construction activities, the project applicant shall allow additional archaeological monitors of Native American tribes to access the project site on a volunteer basis to monitor grading and excavation activities.

## 5.18.8 Level of Significance After Mitigation

### Impact 5.18-1

Mitigation Measures TCR-1 through TCR-3 and Mitigation Measure CUL-5 would reduce potential impacts associated with tribal cultural resources to a level that is less than significant. Therefore, no significant unavoidable adverse impacts relating to tribal cultural resources have been identified

## 5.18.9 References

SWCA Environmental Consultants. 2018a, December. City of Corona General Plan Update: Cultural Resources Technical Report.

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# 5.19 UTILITIES AND SERVICE SYSTEMS

This section of the Draft Environmental Impact Report (DEIR) addresses the potential for implementation of the City of Corona General Plan Update to impact utility and service systems in the City of Corona and its sphere of influence (SOI). Utilities and services systems include water supply and distribution systems; wastewater (sewage) conveyance and treatment; storm drainage systems; solid waste collection and disposal services; and other public utilities. Impacts to hydrology (e.g., flooding) and water quality can be found in Section 5.10, *Hydrology and Water Quality*.

Cumulative impacts related to water supply and distribution systems would be associated with the water purveyors (i.e., Corona Department of Water and Power, Temescal Valley Water District, Home Gardens County Water District, and Eagle Valley Mutual Water Company (EVMWC); wastewater services would be associated with the water reclamation providers (e.g., City of Corona Department of Water and Power Wastewater Division, Temescal Valley Water District, and Home Gardens Sanitary District); storm drainage would be associated with the local and regional stormwater conveyance operated by the City and the Riverside County Flood Control and Water Conservation District; and solid waste collection and disposal services would be associated with County of Riverside Solid Waste Management Division service area. The analysis in this section is based in part on the following technical report:

- *City of Corona General Plan Update – Infrastructure Report for Hydrology, Sewer, Water, and Water Quality, Fuscoe Engineering, Inc., August* 24*, 2018*
- *City of Corona General Plan Update Technical Background Report. 2019*

A complete copy of this study is included as Appendix I and Appendix N to this DEIR, respectively.

## 5.19.1 Wastewater Treatment and Collection

### 5.19.1.1 ENVIRONMENTAL SETTING

#### Regulatory Framework

##### *Federal*

###### *Clean Water Act and National Pollution Elimination Discharge System*

Wastewater treatment before effluent is discharged to Waters of the United States is required by the federal Clean Water Act, United States Code, Title 33, Sections 1251 et seq. Requirements for waste discharges from publicly owned treatment works to navigable waters are addressed in National Pollution Elimination Discharge System (NPDES) regulations under the Clean Water Act. NPDES permits for such discharges in the project region are issued by the Santa Ana Regional Water Quality Control Board.

## Existing Conditions

### *Sewer System*

Figure 5.19-1, *Sewer System,* shows the locations of the existing sewer system within various areas of the City and SOI.

- **Corona Department of Water and Power (DWP).** The City is the primary provider of sewer and sanitation services to Corona. The City of Corona Department of Water and Power (DWP), Wastewater Division services a population of approximately 168,000 people over 38.5 square miles. The City sewer system is comprised of 13 sewer lift stations and associated force mains, three water reclamation facilities, and a network of gravity sewer pipes of approximately 368 miles with sizes ranging from 6 inches to 42 inches in diameter. Approximately 83 percent of City pipes are 8 inches in diameter. The El Cerrito area is currently on septic systems. The City also has capacity in the (Western Riverside County Wastewater Authority) WRCRWA Plant; the City has a capacity of 2.62 million gallons per day (WRCRWA 2019b).

- **Home Gardens Sanitary District (HGSD).** The Home Gardens Sanitary District (HGSD) serves the unincorporated areas of Home Gardens. Within Home Gardens, the HGSD sewer system is comprised of approximately 16 miles of sewer lines ranging in size from 8 inches to 15 inches in diameter with 320 manholes.

- **Temescal Valley Water District (TVWD).** The Temescal Valley Water District (TVWD) provides sewer services to the Temescal Canyon area.

### *Wastewater Treatment Systems*

#### *Corona DWP*

The City operates three water reclamation facilities; the effluent produced meets criteria for discharge to percolation ponds, Temescal Creek, and California Title 22 reuse. The City's wastewater treatment plants are as follows:

- **Water Reclamation Facility 1 (WRF 1):** WRF 1 consists of preliminary treatment, two secondary treatment facilities (Plant 1A and 1B), and a tertiary treatment facility. Up to 5.5 MGD of the flow from the headworks is directed to Plant 1A, which provides a biological nitrogen removal activated sludge process and secondary clarification. Up to 6.0 MGD is conveyed through Plant 1B, which has two oxidation ditches with biological nitrogen removal and secondary clarification. The secondary effluent is either sent to the tertiary treatment facility or to the Lincoln Avenue and Cota Street percolation ponds. The tertiary process produces Title 22 recycled water that can be used for irrigation and/or is discharged to Butterfield Drain, a tributary of Temescal Creek.

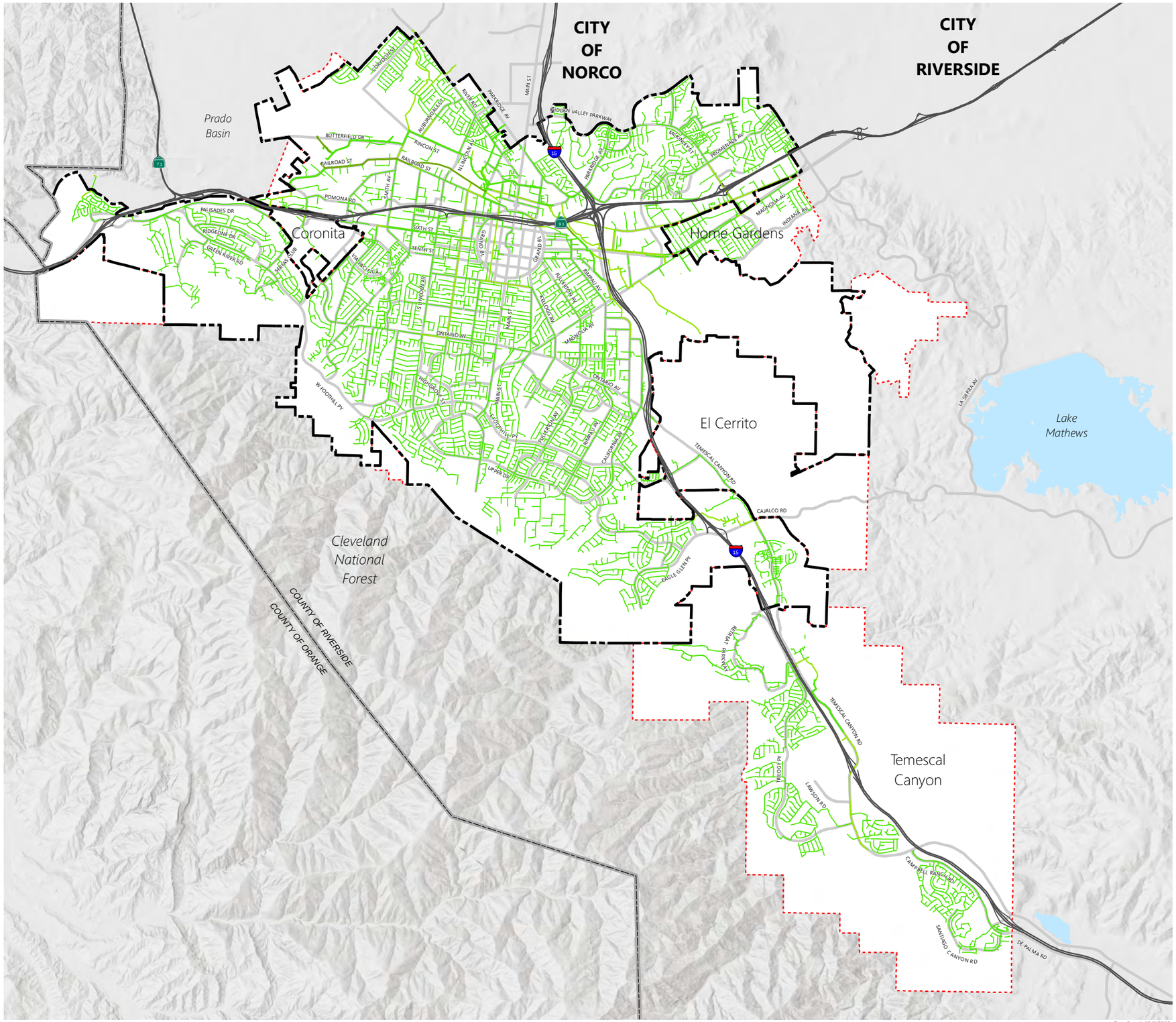


Figure 5.19-1

# SEWER SYSTEM

Legend

- City Boundary
- Sphere of Influence Areas

**Sewer Lines**

- 8" - 12"
- 13" - 18"
- 19" - 27"
- 28" - 48"
- 49" - 75"

*Source:*
*Fuscoe, 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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- **Water Reclamation Facility 2 (WRF 2):** WRF 2 was formerly called Sunkist Treatment Plant and was used to treat industrial process wastewater. The City purchased the plant and renovated it to provide primary and secondary treatment in 1986, and in 1988, WRF 2 became operational. WRF 2 is a conventional activated sludge facility with the ability to bypass flows to WRF 1. It discharges secondary effluent to the Lincoln and Cota Street percolation ponds.

- **Water Reclamation Facility 3 (WRF 3):** WRF 3 was constructed in 2001 and serves the southeastern portion of the City. WWTP 3 is a water reclamation plant that provides Title 22 reclaimed water reuse.

### *HGSD*

HGSD sewer lines connect into the Western Riverside County Wastewater Treatment Plant (WRCWTP) located in the City of Corona. The WRCWTP is under joint management between the Western Municipal Water District (WMWD) and the WRCRWA and treats wastewater from the City of Norco, Jurupa Community Services District, and HGSD. The WRCWTP currently has a capacity of 14 million gallons per day (MGD) and treats wastewater at a tertiary level prior to discharging into the Santa Ana River (Fuscoe 2018). In 2010, the HGSD performed its System Evaluation and Capacity Assurance Plan Report as part of a Sewer System Management Plan to diagnose its primary lines. The system was found to have available capacity for existing and projected land uses. However, its pipe condition evaluation found deficiencies such as cracked and broken pipes, offset joints, and blockages. As of spring 2017, all high-priority improvements to the sewer system listed in the 2010 evaluation had been made, totaling 2,316 feet.

### *TVWD*

In Temescal Valley, TVWD owns and operates regional wastewater treatment facilities adjacent to its Administration and Operation complex within the Wild Rose Business Park. The Reclamation Facility is capable of treating 2.3 MGD of raw sewage and producing tertiary reclaimed water usable for landscape irrigation and other non-consumptive purposes.

### *Water Reclamation Facility Capacity*

Table 5.19-1, *Existing Water Reclamation Facility Flows and Capacity*, provides the flows and capacities of the three water reclamation facilities within the City of Corona and SOI. According to Table 5.19-2, the current treatment capacity of the City's existing water reclamation facilities is 15.5 MGD and 2.62 MGD at WRCRWA for a total of 18.12 MGD. Additionally, there are plans to expand the wastewater treatment capacity at the City's WRF to 18 MGD in the future (Fuscoe 2018).

Table 5.19-1 Existing Water Reclamation Facility Flows and Capacity

| Water Reclamation Facility | 2017 Water Flows (MGD) | Current Treatment Capacity (MGD) | Future Treatment Capacity (MGD) |
|---|---|---|---|
| City of Corona | | | |
| WRF 1 (A + B) | 11.3 | 11.5 | 14.5 |
| WRF 2 | 2.1 | 3.0 | 3.5 |
| WRF 3 | 0.6 | 1.0 | 0[1] |
| *Subtotal WRF 1, 2, and 3* | *14.0* | *15.5* | *18.0* |
| WRCRWA[2] | 2.37 | 2.37 | 2.62 |
| Total City | 16.37 | 16.87 | 20.62 |
| SOI | | | |
| WWTP – TVWD | 1.0 | 2.3 | 2.3 |
| WRCRWA (HGSD Portion)[3] | 0.75 | 1.0 | 1.0 |
| SOI Total | 1.75 | 3.3 | 3.3 |
| City and SOI Total[2] | 15.75 | 18.87 | 23.92 |

Source: Ibrahim 2017; Corona 2015; WRCRWA 2019a; WRCRWA 2019b
Notes: MGD – Million Gallons per Day; N/A: not available.
1 Per communication with City Department of Water and Power (DWP) staff, WWTP 3 will be decommissioned in the future.
2 The current treatment capacity for the City is 2.37 MGD for City and it is assumed that the current flows and treatment capacity are the same. The City is interested in increasing its capacity from 2.37 MGD to 2.62 MGD, which is an increase of 0.25 MGD.
3 Capacity owned by HGSD is 1.0 MGD and the current wastewater flows are 0.75 MGD; however, the WRCRWA has a total of 14.0 MGD.

### *Sewer Generation*

For each land use in the City of Corona and the City's SOI, a total sewer generation was estimated to provide a baseline condition (Fuscoe 2018). Acreages of the existing development were utilized along with their corresponding flow/generation factors to develop existing condition flow rates. Using the sewer generation rates from the City of Corona 2005 Sewer Master Plan, Table 5.19-2, *Existing Condition Average Daily Sewer Generation,* shows the existing sewer generated in the City and SOI. Under the existing conditions, average daily sewer flows are estimated at 18.6 million gallons per day (MGD) throughout the City and SOI. The City and SOI have existing sewer flows of approximately 15.3 MGD and 3.3 MGD, respectively. These conservative flow estimates are for land planning purposes only and generally over-estimate flows compared to actual flows in Table 5.19-1 (Fuscoe 2018).

Table 5.19-2 Existing Condition Average Sewer Generation

| Area | Average Sewer Flows (GPD) | Average Sewer Flows (MGD) |
|---|---|---|
| City of Corona | 15,270,981 | 15.3 |
| SOI | 3,331,095 | 3.3 |
| Total | 18,602,076 | 18.6 |

Source: Fuscoe 2018
Notes: GPD - Gallons per Day; MGD – Million Gallons per Day,

## 5.19.1.2 THRESHOLDS OF SIGNIFICANCE

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

U-1 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.

U-3 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 to the provider's existing commitments.

### 5.19.1.3 RELEVANT GENERAL PLAN POLICIES

The following are relevant policies of the Corona General Plan Update, which may contribute to reducing potential wastewater treatment and collection, and telecommunications impacts as a result of implementation of the proposed project.

#### Land Use Element

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)

- **LU-4.5** Manage the timing of development and allow development to occur only when public infrastructure and services needed to support that development are available, will be provided concurrently, or are committed to be provided within a reasonable time frame.

- **LU-9.10** Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.

- **LU-22.2** Ensure that annexations to the City of Corona are consistent with the goals and policies of the general plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

- **LU-22.4** Require that infrastructure and service improvements for proposed annexation areas do not create an undue burden on existing City of Corona infrastructure and services.

- **LU-22.5** Encourage that, if an area annexes to the City of Corona, a community facilities district or similar financing district shall be established to fund the provision and maintenance of sewers, streets, and other public improvements and services.

- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

## Housing Element

- H-1.2 Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

## Infrastructure Element

- **IU-3.1** Review, evaluate, and update the City's Sewer Master Plan and related capital improvement programs on a regular basis to plan for expansion and improvement of conveyance, storage, and treatment facilities.

- **IU-3.2** Evaluate sewer infrastructure in areas where intensification of land use is anticipated to occur; coordinate capital improvements planning for service infrastructure with the direction, extent, and timing of growth.

- **IU-3.3** Build, upgrade, maintain, and expand existing sewer collection and treatment facilities where existing systems are deficient in accordance with the Sewer Master Plan and state and federal standards.

- **IU-3.4** Require that new development be connected to the municipal sewer system and ensure that adequate capacity is available for the treatment of generated flows and safe disposal of sludge.

- **IU-3.5** As a condition of approval, require that all new development submit a sewer analysis to the satisfaction of the City of Corona prior to the issuance of building permits.

- **IU-3.6** Restrict and prioritize sewer connections, if necessary, to comply with available treatment capacity.

- **IU-3.7** Ensure that sewer connection fees and charges are reviewed annually and are sufficient to fully fund and support the construction, improvement, and rehabilitation of sewer facilities.

- **IU-3.8** Require that new development be connected to the City's sewer system.

- **IU-3.9** Continue to require all applicable industries/businesses to obtain sewer discharge permits from the City and to comply with the City's Waste Discharge Pretreatment and Source Control Program.

- **IU-3.10** Continue to implement, as appropriate, the requirements of the NPDES and SCAQMD regulations, including requiring the use of Best Management Practices by businesses in the City.

### 5.19.1.4 ENVIRONMENTAL IMPACTS

**Impact 5.19-1: Project-generated sewer would be adequately treated by the water reclamation service providers for the project. [Thresholds U-1 (part) and U-3]**

## General Plan

Buildout of the proposed project would involve the installation of new or expanded sewer laterals and mains in the City and SOI. Full buildout under the proposed General Plan Update is estimated to generate an increase of total sewer flows in the City and SOI by 4,058,546 GPD or 12 percent, as shown in Table 5.19-3, *General Plan Update Sewer Generation*. The 1.8 MGD (1,830,240 GPD) change in sewer flows between existing conditions, 15.2 MGD (15,270,981 GPD), and proposed conditions, 17.1 MGD (17,101,221 GPD) would not exceed the projected future capacity of the City's WRFs which has a total future treatment capacity of 18 MGD (Fuscoe 2018). Additionally, the City's WRFs would also have the capacity to receive portions of the proposed increased in sewer flows from the SOI.

Table 5.19-3 General Plan Update Sewer Generation

| Area | Proposed Number of Dwelling Units | Non-Residential SF[1] | Existing Sewer Flows (MGD) | Proposed Sewer Flows (MGD) | Change in Sewer Flows (MGD) | Percent Increase (%) |
|---|---|---|---|---|---|---|
| City of Corona | 5,494 | 9,515,804 | 15.3 | 17.1 | 1.8 | 12% |
| SOI | 6,017 | 16,960,548 | 3.3 | 5.6 | 2.2 | 67% |
| Total | 11,511 | 26,476,352 | 18.6 | 22.7 | 4.1 | 22% |

Source: Fuscoe 2018
Notes: Totals may not equal 100 percent due to rounding. MGD – Million Gallons per Day, SF – Square Feet
[1] Non-Residential includes commercial, retail, open space, agricultural, and mixed land uses

As indicated in the discussion above, portions of the SOI's sewer flows to the TVWD and WRCWTP, which have capacities of 2.3 MGD and 14 MGD, respectively. Both WWTPs would be able to receive portions of the proposed 2.2 MGD (2,228,306 GPD) increase in flows spread across the SOI. HGSD has indicated that flows beyond 0.2 MGD anticipated in its service area would require consultation with HGSD staff to evaluate potential impacts, but that HGSD can accept a portion of the flow increases proposed for the SOI (Fuscoe 2018). Furthermore, through updating appropriate master plans, long-term capital improvement budgets, and assessment districts, TVWD would be able to receive increased in flows consistent with the buildout proposed under implementation of the proposed project.

The anticipated increases under the implementation of the proposed General Plan Update are not anticipated to create any major deficiencies in sewer lines across the City and SOI. The improvement of deficient lines is funded through developer fees for new development and redevelopment projects and capital reserves. Developer fees and individual required permits and applications would vary between sewer service providers. Therefore, no impacts are anticipated from the construction or expansion of sewer facilities, or to service provide capacities as a result of project implementation.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect sewer treatment facilities or capacities. Consequently, implementation of the City's Climate Action Plan would result in less than significant impacts to utilities and service systems.

#### 5.19.1.5 EXISTING REGULATIONS AND STANDARD CONDITIONS

- Code of Federal Regulations, Title 40, Parts 122 et seq.: National Pollution Elimination Discharge System regulations

#### 5.19.1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.19-1.

#### 5.19.1.7 MITIGATION MEASURES

No mitigation is required.

#### 5.19.1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

## 5.19.2 Water Supply and Distribution Systems

#### 5.19.2.1 ENVIRONMENTAL SETTING

### Regulatory Framework

#### *Federal*

***Safe Water Drinking Act***

The federal Safe Drinking Water Act regulates the nation's drinking water and gives the US Environmental Protection Agency (EPA) the authority to set national drinking water standards and regulations. All public water systems that provide service to 25 or more individuals must meet these standards. Water purveyors must monitor for contaminants on fixed schedules and report to the EPA when a maximum contaminant level is exceeded. Contaminants include organic and inorganic chemicals, substances that are known to cause cancer, radionuclides, and microbial contaminants (e.g., coliform and E. coli). The California Department of Public Health is responsible for implementation of the Safe Drinking Water Act in California

## State

### *California Water Codes*

The State Water Code (Section 461) was intended to establish the importance of water recycling to the state of California and its role in meeting demands for water. The Water Recycling Act of 1991 established a statewide goal to recycle a million acre-feet of water per year by 2010. In order to achieve this goal, the act required retail water suppliers to identify potential uses for recycled water within their service areas, potential customers for recycled water service within their service areas, and, within a reasonable time, potential sources of recycled water. The City implements this mandate through the installation of more than 51 miles of reclaimed water lines, tertiary level wastewater treatment plants, and a wide variety of other activities and programs that are set forth in its Reclaimed Water Master Plan.

In accordance with the Water Code (Section 13550), public agency, including a state agency, city, county, city and county, or district shall not use water from any source of quality suitable for potable domestic use for nonpotable uses, including cemeteries, golf courses, parks, highway landscaped areas, and industrial and irrigation uses if suitable recycled water is available and meets the following conditions:

- The source of recycled water is available and of adequate quality for these uses
- The recycled water may be furnished for these uses at a reasonable cost
- After concurrence with the State Department of Public Health, the use of recycled water from the proposed source will not be detrimental to public health; and
- The use of recycled water for these uses will not adversely affect downstream water rights, will not degrade water quality, nor injure plant life, fish, and wildlife.

### *20x2020 Water Conservation Plan*

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

### *Senate Bills 610 and 221*

To assist water suppliers, cities, and counties in integrating water and land use planning, the state passed Senate Bill (SB) 610 (Chapter 643, Statutes of 2001) and SB 221 (Chapter 642, Statutes of 2001), effective January 1, 2002. SB 610 and SB 221 improve the link between information of water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures that promote more collaborative planning between local water suppliers, cities, and counties. Both require detailed information

regarding water availability to be provided to city and county decision makers prior to approval of specified large development projects. This detailed information must be included in the administrative record as the evidentiary basis for an approval action by the city or county on such projects. The statutes recognized local control and decision making regarding the availability of water for projects and the approval of projects. While SB 610 and SB 221 are not applicable to general plans, future projects subject to SB 610 and SB 221 are required to provide a water supply assessment. Under SB 610, water supply assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects subject to CEQA, as defined in Water Code Section 10912[a]. Under SB 221, approval by a city or county of certain types of residential subdivision requires an affirmative verification of sufficient water supply. SB 221 is intended as a fail-safe to ensure collaboration on finding the needed water supplies to serve a new large subdivision before construction begins. General plans serve as an important planning tool for the local water supply when they prepare the 20-year vision for the Urban Water Management Plan (UWMP).

### *Urban Water Management Planning Act*

The Urban Water Management Planning Act of 1983, California Water Code Sections 10610 et seq., requires preparation of a plan that:

- Plans for water supply and assesses reliability of each source of water, over a 20-year period, in 5-year increments.
- Identifies and quantifies adequate water supplies, including recycled water, for existing and future demands in normal, single-dry, and multiple-dry years.
- Implements conservation and the efficient use of urban water supplies. Significant new requirements for quantified demand reductions have been added by the Water Conservation Act of 2009 (SBX7-7), which amends the act and adds new water conservation provisions to the Water Code.

The Urban Water Management Planning Act states that every urban water supplier that provides water to 3,000 or more customers or provides over 3,000 acre-feet of water per year (afy) should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. Both SB 610 and SB 221 identify the UWMP as a planning document that can be used by a water supplier to meet the standards in both statutes. Thorough and complete UWMPs are foundations for water suppliers to fulfill the specific requirements of these two statutes, and they are important source documents for cities and counties as they update their General Plans. Conversely, general plans are source documents as water suppliers update the UWMPs. These planning documents are linked, and their accuracy and usefulness are interdependent (DWR 2014a).

In Corona, three water providers—the Corona Department of Water and Power (DWP), Temescal Valley Water District (TVWD), and Western Municipal Water District (WMWD)—are required to prepare UWMPs. Home Gardens and Eagle Valley water districts are exempt from this requirement because they do not meet the minimum number of connections and/or population. The last round of UWMPs prepared for Corona, western Riverside, and Temescal Valley were adopted in 2015/2016.

*Principles Governing CEQA Analysis of Water Supply*

In *Vineyard Area Citizens for Responsible Growth, Inc., v. City of Rancho Cordova* (February 1, 2007), the California Supreme Court articulated the following principles for analysis of future water supplies for projects subject to CEQA:

- To meet CEQA's informational purposes, the EIR must present sufficient facts to decision makers to evaluate the pros and cons of supplying the necessary amount of water to the project.
- CEQA analysis for large, multiphase projects must assume that all phases of the project will eventually be built, and the EIR must analyze, to the extent reasonably possible, the impacts of providing water to the entire project. Tiering cannot be used to defer water supply analysis until future phases of the project are built.
- CEQA analysis cannot rely on "paper water." The EIR must discuss why the identified water should reasonably be expected to be available. Future water supplies must be likely rather than speculative.
- When there is some uncertainty regarding future availability of water, an EIR should acknowledge the degree of uncertainty, include a discussion of possible alternative sources, and identify the environmental impacts of such alternative sources. Where a full discussion still leaves some uncertainty about long-term water supply, mitigation measures for curtailing future development in the event that intended sources become unavailable may become a part of the EIR's approach.
- The EIR does not need to show that water supplies are definitely ensured, because such a degree of certainty would be "unworkable, as it would require water planning to far outpace land use planning." The requisite degree of certainty of a project's water supply varies with the stage of project approval. CEQA does not require large projects, at the early planning phase, to provide a high degree of certainty regarding long-term future water supplies.
- The EIR analysis may rely on existing urban water management plans, as long as the project's demand was included in the water management plan's future demand accounting.
- The ultimate question under CEQA is not whether an EIR establishes a likely source of water, but whether it adequately addresses the reasonably foreseeable impacts of supplying water to the project.

## Local

The City prepares and periodically updates water master plans that affect its water resources—the urban water management plan, groundwater recharge plans, and reclaimed water master plan.

### *City of Corona 2015 Urban Water Management Plan*

The City has prepared and periodically updates its comprehensive Urban Water Management Plan (UWMP) to ensure careful planning to address water needs for the City and SOI. The plan is designed to sustainably manage the City's water supply to exceed demand through 2040, assuming a population of 182,800 residents. In 2040,

the City projects to import 28,365 afy of water, have approximately 25,400 afy available in the Coldwater and Temescal basins, and have 10,000 afy of reclaimed water available for nonpotable use. The total supply projected for 2040 is 56,396 afy (Corona 2016).

Chapter 8, *Water Shortage Contingency Planning*, of the City of Corona 2015 UWMP indicates the City's authority to impose water use constraints on end users in order to assure sustainability under stressful emergency and long-term water shortage conditions (Corona 2016).

The 2015 UWMP states that stages of action can be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply. The 2015 UWMP lists five Water Conservation Stages, and indicates the conditions under which each stage is implement:

- **Water Conservation Stage 1 – Normal Water Supply:** Applies during periods when the City is able to meet all of the water demands of its customers, and is in effect at all times unless the General Manager otherwise declares that another Water Conservation Stage is in effect.

- **Water Conservation Stage 2 – Minimum Water Shortage:** Applies during periods when a reasonable probability exists that the City will not be able to meet all of the water demands of its customers. This may be caused by, but is not limited to any or all of the following circumstances:

    - A regional water supply shortage and a regional public outreach campaign is being implemented asking or requiring all persons to reduce water,
    - Groundwater well are inoperable or unusable,
    - Alternative water supplies are limited or unavailable,
    - Groundwater levels or groundwater quality is approaching levels which may require additional efforts.

The objective is to reduce water system consumption within the City by 10 to 15 percent.

- **Water Conservation Stage 3 – Moderate Water Shortage:** Applies during periods when the City will not be able to meet all of the water demands of its customers. This may be caused by, but is not limited to any or all of the following circumstances or events:

    - A regional water supply shortage and a regional public outreach campaign is being implemented asking or requiring all persons to reduce water.
    - Groundwater wells are inoperable or unusable.
    - Groundwater levels or groundwater quality is approaching levels which may require additional efforts.

The objective is to reduce water system consumption within the City by 16 to 30 percent.

- **Water Conservation Stage 4 – Severe Water Shortage:** Applies during periods when the City will not be able to meet all of the water demands of its customers. This may be caused by, but is not limited to any or all of the following circumstances:
  - A regional water supply shortage and a regional public outreach campaign is being implemented asking or requiring all persons to reduce water,
  - Groundwater wells are inoperable or unusable,
  - Alternative water supplies are limited or unavailable
  - Groundwater levels or groundwater quality is approaching levels which may require additional efforts,
  - A major failure of any supply or distribution facility, whether temporary or permanent, occurs in the water distribution system of the State, the Metropolitan Water District of Southern California, the Western Municipal Water District, or city water facilities

The objective is to reduce water system consumption within the city by 31 to 40 percent.

- **Water Conservation Stage 5 – Critical Water Shortage:** Applies during periods when the City will not be able to meet all the water demands of its customers. This may be caused by, but is not limited to any or all of the following circumstances:
  - A regional water supply shortage and a regional public outreach campaign is being implemented asking or requiring all persons to reduce water,
  - Groundwater wells are inoperable or unusable,
  - Alternative water supplies are limited or unavailable,
  - Groundwater levels or groundwater quality is approaching levels which may require additional efforts,
  - A major failure of any supply or distribution facility, whether temporary or permanent, occurs in the water distribution system of the State, the Metropolitan Water District of Southern California, the Western Municipal Water District, or city water facilities

The objective is to reduce water system consumption within the city by 40 percent or more.

### *City of Corona Municipal Code*

Chapter 13.36, *Water Conservation*, of the City's Municipal Code outlines the water shortage contingency measures identified in the UWMP.

### *City of Corona 2005 Water Master Plan*

The City of Corona 2005 Water Master Plan was prepared to describe the water distribution system in the City, identify system deficiencies, and recommend improvements. Improvements were recommended to address

water system deficiencies and added to the Capital Improvement Program (CIP) list for funding and construction. The CIP prioritizes projects based on system needs and phasing, and acts as a long-term planning tool to facilitate construction of recommended projects to keep pace with City growth and demands.

Since the 2005 Water Master Plan, nine projects have been fully completed or executed out of the 28 total improvements projects identified in the 2005 Water Master Plan. These completed projects are presented in Table 5.19-4, *City of Corona 2005 Water Master Plan Constructed Improvement Projects*. The remaining 19 projects mentioned in the 2005 Water Master Plan are either in design, in construction, or not yet executed. The City has a formal process in place to ensure that the water system, including fire flow requirements, is functioning and is currently planning on updating the Water Master Plan for the entire City within the next 2-3 years (Fuscoe 2018). As stated in Chapter 5.15, *Public Services,* the Corona Fire Department would ensure sufficient water supplies and pressure for new development during plan review. For development in the SOI, a Plan of Services is be required to be prepared if the SOI incorporated.

Table 5.19-4 City of Corona 2005 Water Master Plan Constructed Improvement Projects

| ID | Project Name | Description |
|---|---|---|
| R. Reservoirs | | |
| R-1 | Zone 6 Reservoir / Jameson (under construction) | This reservoir will provide needed storage capacity and eliminate the need for hydropneumatics pump systems in Zone 6. The control settings for the Payette and Eagle Glen Zone 6 Pump Stations will be based on the Zone 6 Reservoir water levels. |
| R-3 | Zone 2 Reservoir / R -3 | This new reservoir will provide emergency storage capacity for Zone 2, north of Ontario Avenue. |
| V. Pressure Reducing Valves | | |
| V-2 | Miguel Pressure Reducing Station | This new pressure reducing station provides a route for water to flow from Zone 6 to Zone 5 if needed. |
| V-3 | Summerhill Pressure Reducing Station | This new PRV, allowing water to flow from Zone 4 to Zone 3, will help achieve adequate fire protection on Weirick Road. |
| P. Pipes | | |
| P-1 | Re-Zone Paseo Grande Hydrants | At Paseo Grande and Hummingbird Lane, the Zone 2 pressure is sufficient to meet normal demand. However, it is insufficient to reliability meet fire-flow conditions. Thus, it is recommended that two fire hydrants on Paseo Grande be converted to Zone 3. |
| P-2 | Re-Zone Sonrisa Hydrants | At Sonrisa Drive and Pacific Avenue, the Zone 4 pressure is sufficient to feed the normal demand. However, it is insufficient to reliability meet fireflow conditions. Thus, it is recommended that four fire hydrants on Sonrisa Drive be converted to Zone 5. |
| P-3 | Re-Zone Garretson Hydrants | At Garretson Circle and Pacific Avenue, the Zone 4 pressure is sufficient to feed the normal demand. However, it is insufficient to reliability meet fire-flow conditions. Thus, it is recommended that three fire hydrants on Garretson Circle be converted to Zone 5. |
| P-5 | Harlan Hills – Mabey Cyn – Zone 5 Transmission Main | This 16-inch pipe connects the Harlan Hills and Mabey Canyon hydro-pneumatic sub- zones to Zone 5. This conversion reduces the wear on the Harlan Hills and Mabey Canyon booster pumps because they will not be turning on and off with as high of frequency. It also makes the system more robust by enabling water to move where it is most needed. |
| P-6 | Fair Isle Transmission Pipeline | This pipe connects Fair Isle Court to Alamitos Circle across a valley in Zone 6. In order to reduce the velocity through this pipe, it should be upsized to 16-inches. |

Source: Fuscoe 2018

### *City of Corona 2018 Reclaimed Water Master Plan*

In July 2018, the City completed its Reclaimed Water Master Plan (RWMP). The goal of this plan is to aid the City in meeting current and future goals for reclaimed water usage. Additionally, the RWMP aims to adequately prepare the City for the decommissioning of WRF 3 and for the addition of the new Western Riverside County Regional Wastewater Authority (WRCRWA) treatment plant as a new source of reclaimed water in the City. The goals of the RWMP are consistent with targets and plans set forth in the 2005 Water Master Plan. The 2018 RWMP estimates existing recycled water production as 11.34 MGD; existing reclaimed water demand is 2 MGD, primarily used for irrigation across the City (Fuscoe 2018).

## Existing Conditions

### *Water Districts*

There are four water districts providers that serve the City and SOI: the Corona Department of Water and Power (DWP); the Eagle Valley Mutual Water Company (EVMWC); the Home Gardens County Water District (HGCWD); and the Temescal Valley Water District (TVWD). Figure 5.19-2, *Water Districts*, shows the service areas for each water provider.

The Corona DWP is responsible for supplying potable water to the City and surrounding areas. This area includes approximately 39 square miles within the City's municipal area and 35 square miles in the SOI. Within the West sphere of influence (West Sphere) (Coronita) the City provides domestic water services to residential and nonresidential customers. In the East sphere of influence (East Sphere), the City of Riverside and the HGCWD provide water to customers in the Home Gardens area. The WMWD serves the East Eagle Valley area. The City of Corona serve the El Cerrito area. Within the South sphere of influence (South Sphere), the Temescal Canyon area is served by the WMWD and TVWD. When developed, the City's easterly sphere of influence (East Sphere) above 1,000 feet elevation will be served by the WMWD.

### *Corona and SOI Water Supply*

#### *City of Corona Department of Water and Power (DWP)*

The City receives water from two main sources: groundwater sources from three basins managed by the City DWP and imported water from WMWD. The groundwater basins—including the Coldwater Basin, Temescal Basin, and Bedford Basin (see Section 5.10, *Hydrology and Water Quality*, Figure 5.10-1, *Hydrology*, for a description of the groundwater basins underlaying the City and SOI)—provide approximately 40 percent of the City's water supply from 22 wells with a total capacity of 39,200 acre-feet (af)/year (35 MGD). The remaining 60 percent of the City's water supply is imported from WMWD through the Lower Feeder Pipeline (raw Colorado River water) and Mills Pipeline Connection (treated State Project water). The total capacity of the imported water supply is 39,840 af/year (35.6 MGD). Table 5.19-5, *Corona DWP Water Supply and Demand, 2020-2040*, shows that the City forecasts adequate water supplies in normal years to meet demand through 2040.

Table 5.19-5 Corona DWP Water Supply and Demand, 2020-2040

| Water Supplies | Projections for Normal Year (Acre-Feet) | | | | |
|---|---|---|---|---|---|
| | 2020 | 2025 | 2030 | 2035 | 2040 |
| Imported Water | 28,365 | 28,365 | 28,365 | 28,365 | 28,365 |
| Groundwater: Coldwater Basin | 2,596 | 2,596 | 2,596 | 2,596 | 2,596 |
| Groundwater: Temescal Basin | 15,435 | 15,435 | 15,435 | 15,435 | 15,435 |
| Reclaimed Water | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| Total Supplies | 56,396 | 56,396 | 56,396 | 56,396 | 56,396 |
| Demand | 39,533 | 39,514 | 39,555 | 39,636 | 39,636 |
| Surplus | 16,863 | 16,882 | 16,841 | 16,760 | 16,760 |

Source: Corona 2016
Note: Home Gardens County Water District (HGCWD) purchases all its water from the City of Corona and its demand and supply figures are included within the overall estimate for Corona

The City's water system contains six primary pressure zones ranging from a minimum elevation of 430 feet to a maximum elevation of 1,640 feet. The City maintains 16 booster pump stations equipped with a total of 45 booster pumps to deliver groundwater from the wells to the City supply system (Fuscoe 2018).

Raw water is treated at the Lester and Sierra del Oro Treatment Plants prior to entering the City's system. The Sierra del Oro Treatment Plant treats an average of 5 million gallons of water per day. The Lester Treatment Plant also receives raw water from the Colorado River. The City operates eight blending stations that blend groundwater and imported sources to meet the standards of the Environmental Protection Agency (USEPA) and California Department of Health Services. Prior to distribution throughout the City, the blended water is stored in 15 reservoirs throughout the City's six service zones, with one concrete reservoir with a 2.5 million-gallon (MG) capacity proposed for construction, according to the City of Corona 2005 Water Master Plan. The total storage of the 16 reservoirs is approximately 43.3 MG (Fuscoe 2018).

### *Eagle Valley Mutual Water Company (EVMWD)*

The Eagle Valley Mutual Water Company supplies nonpotable irrigation water to an agricultural area covering approximately 3,000 acres in Eagle Valley, located west of Lake Mathews. Eagle Valley currently does not pump groundwater at this time and is wholly dependent on the WMWD for nonpotable water supplies. In 2015, Eagle Valley purchased 90 acre-feet of nonpotable imported water from WMWD.

### *Western Municipal Water District (WMWD)*

WMWD's water supplies consist primarily of purchased or imported water. The majority of this water is purchased from Metropolitan Water District of Southern California (MWD). To increase local supply reliability, WMWD produces and sells recycled water in its retail service area. About 76 percent of the water WMWD sells is treated, with the balance being raw or recycled water. About one-third (29 percent) of WMWD's water sales are for retail purposes; the rest being wholesale (WMWD 2016). Table 5.19-6, *WMWD Water Supply and Demand, 2020-2040*, shows that the WMWD has adequate supplies for the years of 2020–2040.

Table 5-19-6 WMWD Water Supply and Demand, 2020-2040

| | Wholesale Projections for Normal Year (Acre-Feet) | | | | |
|---|---|---|---|---|---|
| Water Supplies | 2020 | 2025 | 2030 | 2035 | 2040 |
| Retail | | | | | |
| Total Retail Supplies | 69,718 | 76,264 | 79,672 | 92,030 | 90,400 |
| Total Retail Demands | 30,814 | 33,714 | 36,415 | 39,170 | 41,704 |
| Total Retail Surplus | 38,904 | 42,550 | 43,257 | 52,860 | 48,696 |
| Wholesale | | | | | |
| Total Wholesale Supplies | 152,491 | 159,389 | 169,372 | 178,155 | 184,095 |
| Total Wholesale Demand | | | | | |
| WMWD Retail | 29,214 | 31,814 | 34,315 | 36,770 | 39,004 |
| Other Imported Water Agencies | 79,973 | 80,325 | 87,100 | 83,725 | 91,295 |
| Recycled Water[1] | 1,600 | 1,900 | 2,100 | 2,100 | 2,700 |
| Total | 110,787 | 114,039 | 123,515 | 122,895 | 132,999 |
| Total Wholesale Surplus | 41,704 | 45,350 | 45,857 | 55,260 | 51,096 |

Source: WMWD 2016

*Future Water Treatment and Supply Projects*

The Riverside-Corona Feeder is proposed by the WMWD to serve the western portion of Riverside County and provide an additional water source for the City. The Riverside-Corona Feeder would consist of 20 wells and 28 miles of pipeline to capture, store, and distribute water from wet years for future use and reduce dependency on the Colorado River. The Riverside-Corona Feeder is estimated to provide an additional 40,000 af of water to benefit the various cities and water districts served by the project. The Inland Empire Brine Line is a treatment facility that receives industrial wastewater and removes excess salt before redirecting it to the Pacific Ocean. This project seeks to reduce the impact of salt on plants and wildlife in the Santa Ana River, as well as provide for cleaner waters that enter the groundwater basins. A portion of water from both projects would be available to the City and SOI (Fuscoe 2018).

### *Home Gardens County Water District (HGCWD)*

Initially, HGCWD served its customers with local groundwater from the Temescal basin supplemented by the City of Riverside. HGCWD no longer pumps groundwater, and instead purchases all of its water from the City of Corona and City of Riverside (WMWD 2016). Water lines in the Home Gardens DUC are 4 to 16 inches in diameter. Since the district is a member agency of WMWD, treatment capacity to deliver water to Home Gardens is adequate, as described earlier. After personal communication with Home Gardens County Water District staff, it has been determined that the majority of the water system was constructed in 1987 and is in good working condition. There are no existing deficiencies to the system.

### *Temescal Valley Water District (TVWD)*

TVWD receives all of its water supply from imported water from Metropolitan Water District (MWD) via the Mills Pipeline. The Mills Pipeline serves other communities besides those served by TVWD including part of the City, Eagle Valley area, and other unincorporated areas of Riverside County. All water delivered to TVWD is imported from northern California via the State Water Project system. Once transferred to southern California, the imported water is treated at the Mills Water Filtration Plant located. This water, which is delivered to TVWD, meets all local, state, and federal requirements for water quality (Fuscoe 2018). Table 5.19-7, *TVWD Water Supply and Demand, 2020-2040*, shows that the TVWD has adequate supplies for the years of 2020–2040.

Table 5-19-7 TVWD Water Supply and Demand, 2020-2040

| | Projections for Normal Year (Acre-Feet) | | | | |
|---|---|---|---|---|---|
| Water Supplies | 2020 | 2025 | 2030 | 2035 | 2040 |
| Imported Water | 3,000 | 3,250 | 3,500 | 4,000 | 4,100 |
| Recycled Water | 1,280 | 2,115 | 2,115 | 2,115 | 2,115 |
| Groundwater – Bedford Subbasin | 1,100 | 2,000 | 2,500 | 2,500 | 2,500 |
| Total Supplies | 5,380 | 7,365 | 8,115 | 8,615 | 8,715 |
| Demand | 4,344 | 5,435 | 5,690 | 6,201 | 6,303 |
| Surplus | 1,036 | 1,930 | 2,425 | 2,414 | 2,412 |

Source: TVWD 2017

### *Potable Water Infrastructure*

Figure 5.19-3, *Water System*, shows the locations of the various-sized water lines serving the City and SOI.

- **The Corona DWP's** service zones are interconnected between reservoirs and supply sources by major transmission pipelines ranging from 12 inches to 36 inches in diameter. Distribution pipelines ranging from 6 inches to 12 inches in diameter connect the transmission lines to various residential, industrial, and commercial developments. The City of Corona DWP provides water services to the El Cerrito where water system line ranges from 4 inches to 30 inches. The El Cerrito was included in the City's assessment, and no existing deficiencies exist. All fire flow requirements associated with booster stations, pressure regulating stations, and other features of the water system are functioning within El Cerrito (Fuscoe 2018).The City's water system requires certain fire flow standards to be maintained, which also apply to El Cerrito.

- **HGCWD** provides water services to Home Gardens through water lines that range in size between 6 inches to 12 inches in diameter. As a member agency of WMWD, treatment capacity to deliver water to Home Gardens is adequate. The HGCWD has determined that the majority of the water system was constructed in 1987 and is in good condition, including fire flow requirements; there are no existing deficiencies to the system (Fuscoe 2018).

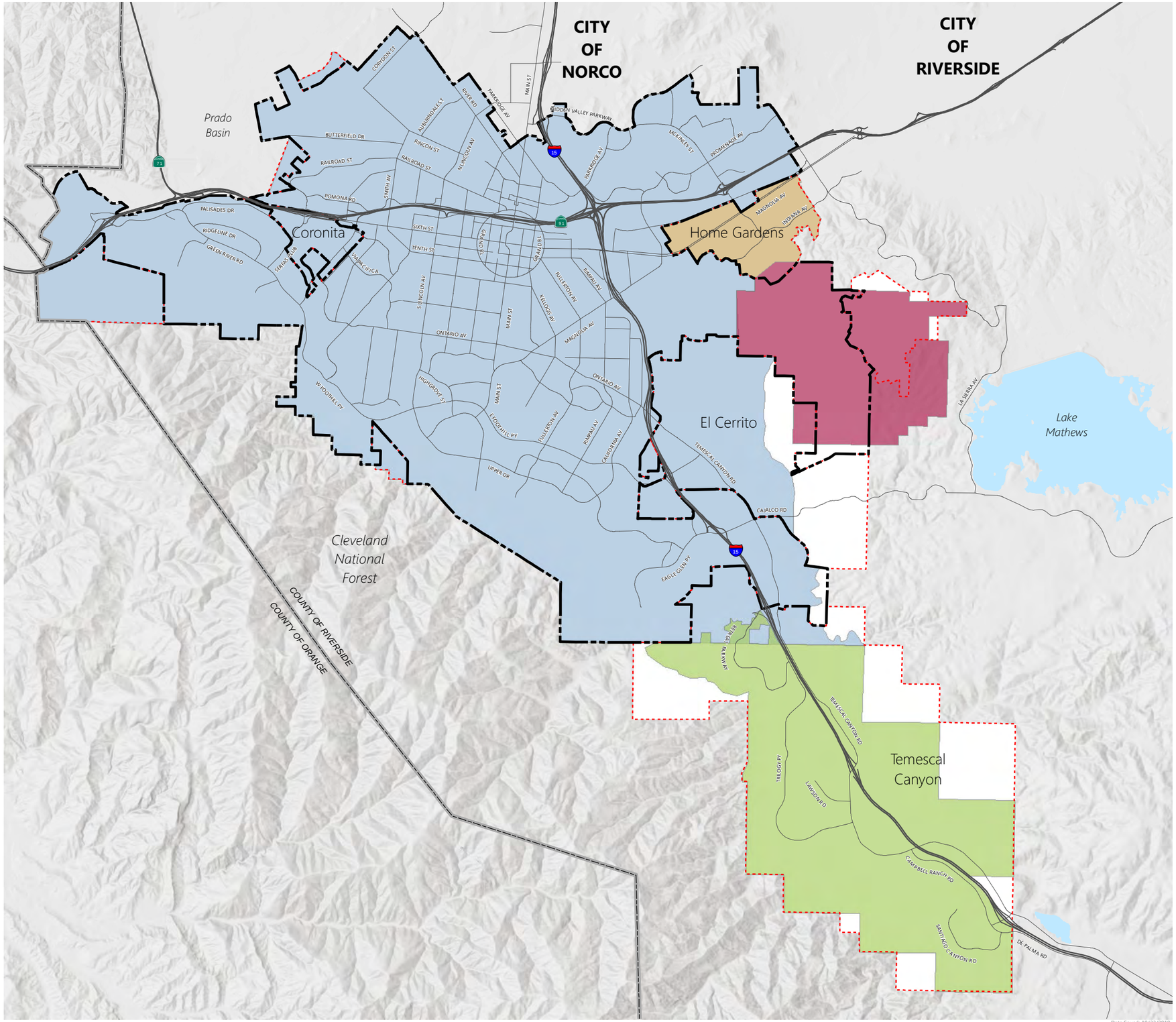


Figure 5.19-2

# WATER DISTRICTS

## Legend

- City Boundary
- Sphere of Influence Areas
- City of Corona Department of Water and Power
- Eagle Valley Mutual Water Company
- Home Gardens County Water District
- Temescal Valley Water District

*Source:*
*City of Corona 2015 UWMP*
*County of Riverside 2017*

Date Saved: 10/23/2019

CORONA
General Plan EIR

Miles
0 0.5 1 1.5 2

PLACEWORKS

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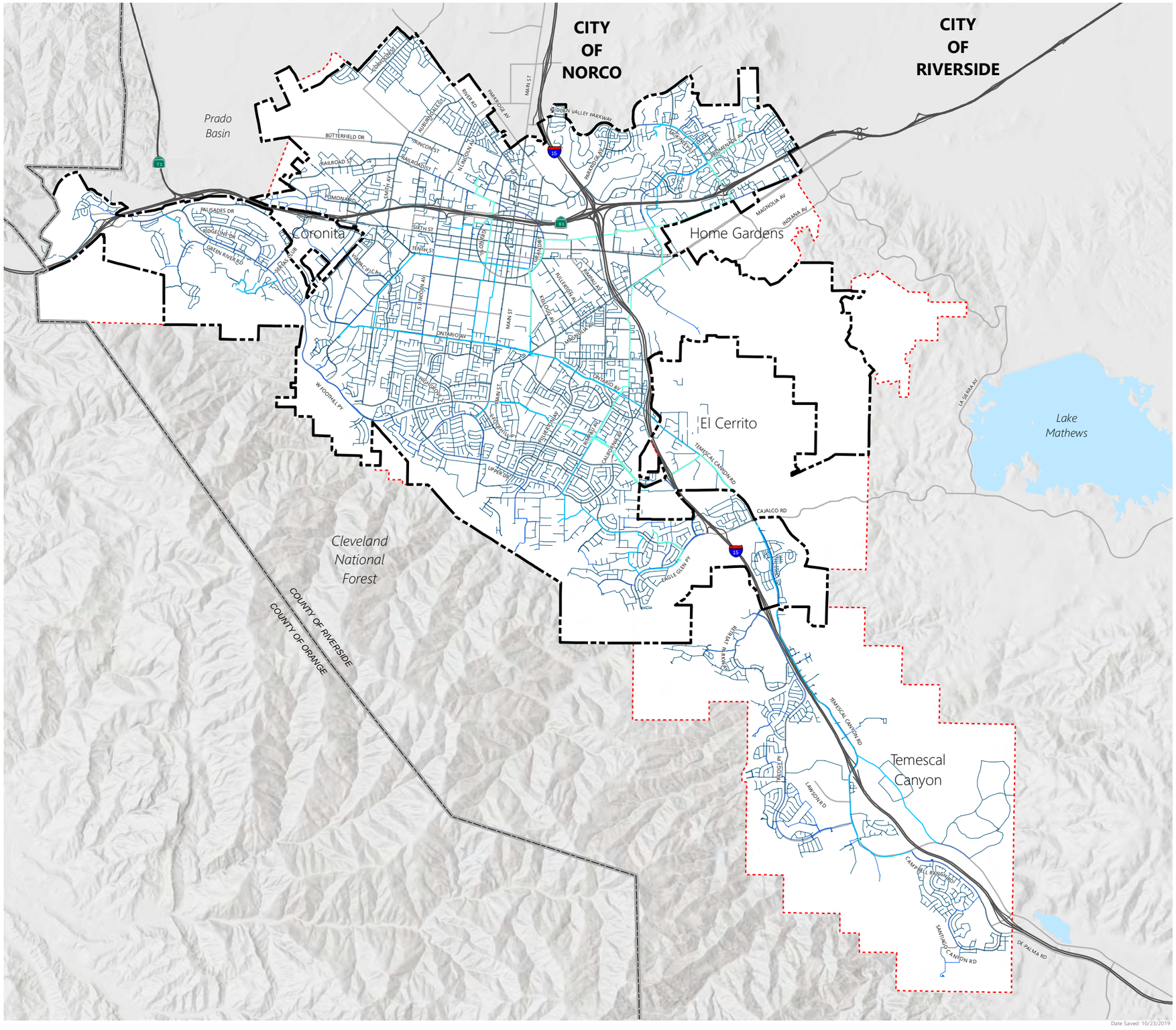


Figure 5.19-3

# WATER SYSTEM

Legend

- City Boundary
- Sphere of Influence Areas

**Water Lines**

- 8" - 12"
- 14" - 18"
- 20" - 28"
- 30" - 48"
- > 48"

*Source:*
*Fuscoe 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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- **TCWD** monitors its water infrastructure. Ongoing monitoring and maintenance occur on an as needed basis. The water system is also in good condition and there are currently no projects planned in the near future (Fuscoe 2018).

### *Reclaimed Water Infrastructure*

Figure 5.19-4, *Reclaimed Water System*, shows the locations of the reclaimed water lines throughout the City and SOI.

The City's reclaimed water system, which ties into the three wastewater treatment facilities, treats an average of 13.5 MGD and the system consists of three reclaimed water storage tanks, five reclaimed booster stations, and 44 miles of reclaimed water lines (Fuscoe 2018). Reclaimed water is stored in three storage tanks with a combined capacity of 7 million gallons. Six pumping facilities and 51 miles of reclaimed water lines transport and deliver water. Reclaimed water serves the irrigation needs of 26 City parks, 17 schools, and many City, commercial, industrial, and multi-family residential common area landscaping. The average annual production from these sources is 11.35 mgd. This level of production is equivalent to 12,700 acre-feet per year (AFY). Supply is anticipated to increase incrementally due to population growth by an additional 0.88 MGD through 2040 (about 7.8 percent). Existing average reclaimed water demand is 1,411 gpm (2,276 AFY), or about 17.9 percent of existing production. By agreement with WMWD regarding the Prado Settlement, the City discharges 1,625 AFY to the Santa Ana River Watershed. This is about 12.8 percent of existing production.

The City is also participating in the proposed Stagecoach Reclaimed Waterline that will connect the City of Corona, city of Norco, and the Western Riverside County Regional Wastewater Authority facility in Eastvale. The proposed Waterline will provide the City with access to additional reclaimed water for irrigation and industrial use to reduce the City's potable water demand (Fuscoe 2018).

In Temescal Valley, recycled water pipelines were built in 2006 to supply recycled water produced at the TVWD wastewater treatment plant for landscape irrigation, golf course irrigation, industrial uses, and other Title 22–approved uses. Excess recycled water is dechlorinated and discharged to Temescal Creek. In 2015, the TVWD delivered approximately 910 acre-feet of recycled water.

### *Water Quality*

As is the case with most southern California communities, water purveyors blend water from different sources to achieve compliance with state and federal water quality standards. This is particularly the case for communities with a legacy of industrial activities, agricultural land uses, or septic fields. At one time, the vast majority of Corona was covered by agricultural fields, many of which were fertilized with substances that left a high level of salt and nitrate in the groundwater.

The City of Corona DWP receives water from both domestic and imported water sources. The City of Corona DWP has adopted a blending and treatment plan to achieve State of California Title 22 water quality standards. Five blending stations and several treatment facilities are used to ensure that tap water meets requirements of the federal and state environmental protection agencies and the California Department of Health Services. Untreated Colorado River is received through the Lower Feeder and distributed to Corona's Lester and Sierra

del Oro water treatment plants. The City also receives treated State Water Project water from MWD's Mills Water Treatment Plant. The City's present water supply meets all state and federal requirements for safe and healthful drinking water.

### Existing Water Demand

Water demand estimates were developed as a baseline for land uses in the City and SOI. Water demand factors specific to the City of Corona are not available, therefore, regional water demand estimates derived from the 2005 City of Corona Water Master Plan were employed to calculate water demands. Table 5.19-8, *Existing Condition Average Daily Water Demand*, provides a summary of the existing condition water demand for the City and SOI.

**Table 5.19-8 Existing Condition Average Daily Water Demand**

| Area | Average Water Demand (GPD) |
|---|---|
| City of Corona | 22,147,437 |
| SOI | 5,557,468 |
| Total | 27,704,906 |

Source: Fuscoe 2018
Notes: GPD – Gallons per Day, SF – Square Feet

Under the existing conditions, average daily water demands are estimated at 27.7 MGD for both the City and the SOI. The existing water demand for the City and SOI are 22.1 MGD and 5.6 MGD, respectively. These conservative flow estimates are for land planning purposes only and generally over-estimate flows (Fuscoe 2018).

The majority of the service area consists of residential land uses. The City of Corona 2015 UWMP reported the City's daily per capita water demand as 163 gallons per capita per day (GPCD) in 2015[1], which is below the minimum water use reduction target of 213 GPCD, as required by SBX7-7 (Fuscoe 2018).

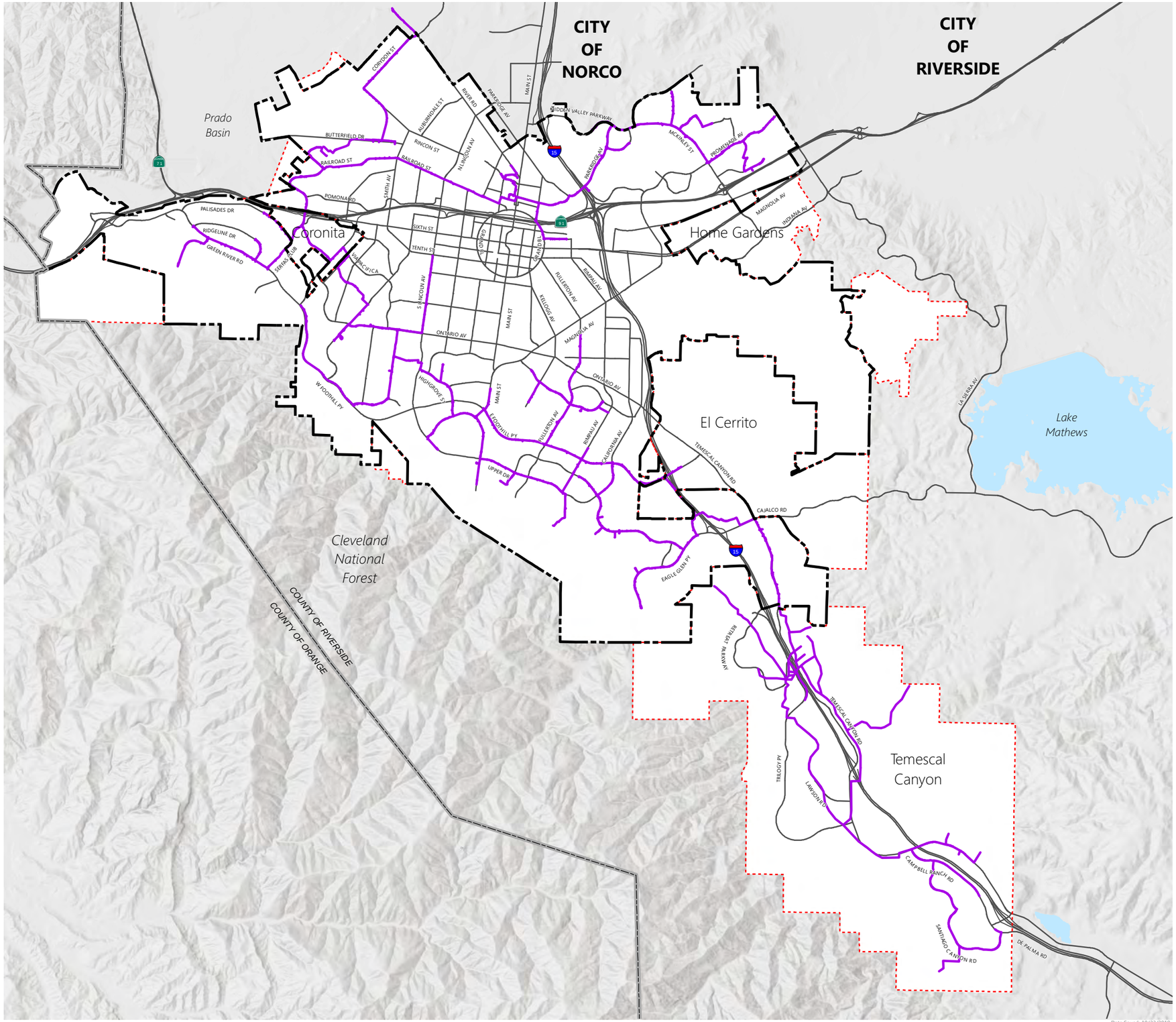
## 5.19.2.2 THRESHOLDS OF SIGNIFICANCE

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

**U-1** 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.

**U-2** Have sufficient water supplies to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

[1] Based on an estimated population of 167,764 people served by the City DWP service boundary in 2015 in the City and SOI.




Date Saved: 10/23/2019

Figure 5.19-4

# RECLAIMED WATER SYSTEM

Legend

- City Boundary
- Sphere of Influence Areas
- Reclaimed Water Lines

*Source:*
*City of Corona 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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### 5.19.2.3 RELEVANT GENERAL PLAN POLICIES

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential water supply and distribution impacts as a result of implementation of the proposed project.

#### Land Use Element

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)
- **LU-4.5** Manage the timing of development and allow development to occur only when public infrastructure and services needed to support that development are available, will be provided concurrently, or are committed to be provided within a reasonable time frame.
- **LU-9.10** Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.
- **LU-22.2** Ensure that annexations to the City of Corona are consistent with the goals and policies of the general plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.
- **LU-22.4** Require that infrastructure and service improvements for proposed annexation areas do not create an undue burden on existing City of Corona infrastructure and services.
- **LU-22.5** Encourage that, if an area annexes to the City of Corona, a community facilities district or similar financing district shall be established to fund the provision and maintenance of sewers, streets, and other public improvements and services.
- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

#### Housing Element

- **H-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

#### Infrastructure Element

- **IU-1.1** Review, evaluate, and update the City's Urban Water Management Plan and related capital improvement programs on a regular basis in order to maintain plans for expansion and improvement of distribution and storage facilities.

- **IU-1.2** Evaluate the adequacy of water infrastructure in areas where intensification of land use is anticipated; coordinate capital improvements planning for all municipal water service infrastructure with the direction, extent, and timing of growth.

- **IU-1.3** Construct, upgrade, maintain, and expand water supply, distribution, pumping, storage, and treatment facilities in the Urban Water Management Plan and/or as required to meet state and federal standards.

- **IU-1.4** Designate, preserve, and acquire land, if necessary, for siting future water supply, storage, and distribution facilities in conformity with the goals and policies of the Land Use Element.

- **IU-1.5** As a condition of permit approval, require adequate water supply, distribution, pumping, storage, and treatment facilities to be operational prior to the issuance of building permits.

- **IU-1.6** Achieve and maintain compliance with all federal, state, and local regulatory standards for drinking water to protect the health, safety, and welfare of Corona.

- **IU-1.7** Require all new development to be served from an approved domestic water supply to protect the health and safety of the public and groundwater supplies.

- **IU-1.8** Through engineering design, construction practices, and enforcement of water regulatory standards, ensure that existing and new land uses and development do not degrade the City's surface waters and groundwater supplies.

- **IU-1.9** Require the costs of improvements to the water supply transmission, distribution, pumping, storage, and treatment facilities necessitated by new development be equitably borne by beneficiaries, either through the payment of fees, or construction of the improvements.

- **IU-2.1** Continue to implement the City's water conservation and reuse efforts; review these programs regularly, and modify them as appropriate and feasible.

- **IU-2.2** Establish guidelines and standards for water conservation and actively promote use of water-conserving devices and practices in new construction, major alterations and additions to existing buildings, and retrofitting of irrigation systems where feasible.

- **IU-2.3** Require incorporation of best available technologies for water conservation, internally and externally, in new construction and associated site design.

- **IU-2.4** Expand the recycled water program to provide water for landscaped medians and other appropriate open spaces along SR-91 and I-15, in coordination with Caltrans when feasible.

- **IU-2.5** Require that sewer flows be minimized in existing and future developments through water conservation and recycling efforts.

- **IU-2.6** Encourage the use of recycled water by industrial, commercial, and institutional users through the use of incentives such as differential pricing; require recycled water use for landscaped irrigation, grading, and other noncontact uses in new projects, where feasible

- **IU-2.7** Require the use of recycled water for landscaped irrigation, grading, and other noncontact uses in new developments, parks, golf courses, sports fields, and comparable uses, where feasible.

- **IU-2.8** Continue to provide and support public educational efforts to residents, business, and students regarding the importance of water conservation and recycled water use.

- **IU-2.9** Require that grading plans be designed and implemented to reduce stormwater runoff by capturing rainwater onsite and storing on a temporary, short-term basis to facilitate groundwater recharge rather than relying solely on community drainage facilities.

- **IU-2.10** Require the use of rainwater capture and storage facilities, techniques, and improvements in residential and nonresidential developments to further objectives for water conservation.

### 5.19.2.4 ENVIRONMENTAL IMPACTS

**Impact 5.19-2: Water supply and delivery systems are adequate to meet project requirements. [Thresholds U1 (part) and U-2]**

#### General Plan

Buildout of the proposed project would increase population in the City and SOI by approximately 11,511 residents, and an increase of 26,476,352 square feet of non-residential uses. As indicated in the infrastructure technical report prepared by Fuscoe, specific impacts on the regional water system would be determined when the Corona Water Master Plan and respective planning documents for the SOI are updated to reflect the land uses associated with the proposed project. However, major deficiencies are not anticipated as the City has confirmed that it would have adequate capacity to accommodate the proposed increases in water demands under the proposed project. The City has identified 19 water system improvement projects, as noted in the 2005 Water Master Plan. These projects would increase the City water system's capacity and functionality to accommodate growth.

Additionally, water demands, under buildout of the proposed project, would increase due to the increase in dwelling units and commercial development. Table 5.19-9, *Proposed Water Demands*, shows the proposed water demands in the City and SOI.

Table 5.19-9 Proposed Water Demands

| Area | Number of Proposed Dwelling Units | Non-Residential SF[1] | Existing Water Demand (GPD) | Proposed Water Demand (GPD) | Change in Demand (GPD) | Percent Increase (%) |
|---|---|---|---|---|---|---|
| City of Corona | 5,494 | 9,515,804 | 22,147,437 | 24,619,203 | 2,471,856 | 11 |
| SOI | 6,017 | 16,960,548 | 5,557,468 | 9,052,764 | 3,495,326 | 63 |
| Total | 11,511 | 26,476,352 | 27,704,906 | 33,671,997 | 5,967,182 | 22 |

Source: Fuscoe 2018
Notes: GPD – Gallons per Day, SF – Square Feet
[1] Non-residential includes commercial, retail, open space, agricultural, and mixed land uses.

As shown the table, water demands would increase by 5.97 MGD (5,967,182 GPD) in the City and SOI, which is an increase of 22 percent. The City has a total groundwater capacity of 35 MGD and a total imported water supply of 35.6 MGD. The proposed increase of 2.4 MGD (24,61,203 GPD) for the City and 3.5 MGD (3,495,326 GPD) can be served by the City's current water resources without the need for new or expanded entitlements (Fuscoe 2018). According to the City of Corona 2018 Reclaimed Water Master Plan, the City is planning on increasing its use of recycled water throughout its service area, which would improve the City's water security and efficiency. Recycled water production is estimated to increase to 7.8 percent, which is an increase of 0.88 MGD by 2040 (Fuscoe 2018). Additionally, a TVWD and HGWCD receive imported water from the WMWD, this supply would be adequate to meet the proposed increases in demand under the buildout of the proposed project.

Individual projects would be subject to City permits, fees, and applications in order to ensure that these projects would not pose burdens on the existing infrastructure. TVMD and EVMWC would both be able to serve the increased demands under the proposed project through updating appropriate master plans and developer fees to accommodate for any expansions to infrastructure that may be necessary. No significant impacts from the construction or expansion of water facilities or to water supplies are anticipated.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect water treatment facilities or water supplies. Consequently, implementation of the City's Climate Action Plan would result in less than significant impacts to utilities and service systems.

## 5.19.2.5 EXISTING REGULATIONS AND STANDARD CONDITIONS

### State

- California Water Code Sections 10610 et seq.: Urban Water Management Planning Act
- California Water Code Sections 10800 et seq. and 10608 et seq.: Water Conservation Act of 2009 (SBX7-7)
- Chapter 642, Statutes of 2001: Senate Bill 221: Land Use and Water Supplies
- Chapter 643, Statutes of 2001: Senate Bill 610: Water Supply Planning

### City of Corona

- City of Corona Municipal Code, Chapter 13.36, Water Conservation

#### 5.19.2.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.19-2.

#### 5.19.2.7 MITIGATION MEASURES

No mitigation is required.

#### 5.19.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

## 5.19.3 Storm Drainage Systems

### 5.19.3.1 ENVIRONMENTAL SETTING

### Regulatory Framework

#### *Regional*

***County of Riverside MS4 Permit, Drainage Area Management Plan (DAMP) and Local Implementation Plans (LIP)***

In January 2010, the Santa Ana RWQCB re-issued the Riverside County MS4 Storm Water Permit as WDR Order R8-2010-0033 (NPDES Permit No. CAS618033) to the County of Riverside, the incorporated cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the Santa Ana Region. Pursuant to the 2010 MS4 Permit, the Co-permittees were required to update and implement a Drainage Area Management Plan (DAMP) for its jurisdiction, as well as Local Implementation Plans (LIPs), which describe the Co-permittees' urban runoff management programs for their local jurisdictions.

***County of Riverside Municipal NPDES Storm Water Permit***

The State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions to address the impacts trash has on the beneficial uses of surface waters. The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees, including the City of Corona, that have regulatory authority over Priority Land Uses, the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by June 2, 2017. Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through the orders in accordance with Water Code section 13383, as specified in the Trash Provisions.

### *Local*

#### *City of Corona Municipal Code*

*Chapter 13.16, Storm Drains*

The City of Corona Municipal Code requirements for drainage and stormwater quality protection are set forth in Chapter 13.16, *Storm Drains*. This Chapter indicates that diverting water flow, depositing debris in ditches, and cutting ditches require a permit; permitting waste or irrigation water to flow into storm drains is prohibited; and that permitting wastewater into any public street, alley, or place in the City.

*Chapter 13.27, Storm Water Management and Discharge Controls*

The purpose of this Chapter of the City's Municipal Code is to protect the future health, safety, and general welfare of the City's citizens by reducing pollutants in storm water discharges, regulating illicit connections and discharges to the storm drain system, and regulating non-storm water discharges to the storm drain system.

#### *City of Corona Storm Drain Master Plan*

The City of Corona Storm Drain Master Plan was first prepared in 1998 and updated in April 2003. The purpose of the Master Plan is to analyze the capacity of the storm drain facilities within the City and identify any deficiencies or capital improvements needed. The City's objective is for existing and proposed storm drain systems to meet the minimum 10-year frequency storm event. The City conducted a deficiency analysis of the existing drainage system three deficiency remedies were prepared:

- **New System:** Install new system on one side of the street.
- **Replacement System:** Replace the existing storm drain system with a new, optimized system element typically larger than existing size.
- **Parallel System:** Install another system element parallel with the existing system element, while optimizing all elements of flow capacities.

## Existing Conditions

### *Storm Drain Facilities*

Figure 5.19-5, *Storm Drain System*, shows the existing storm drain system throughout the City and the SOI.

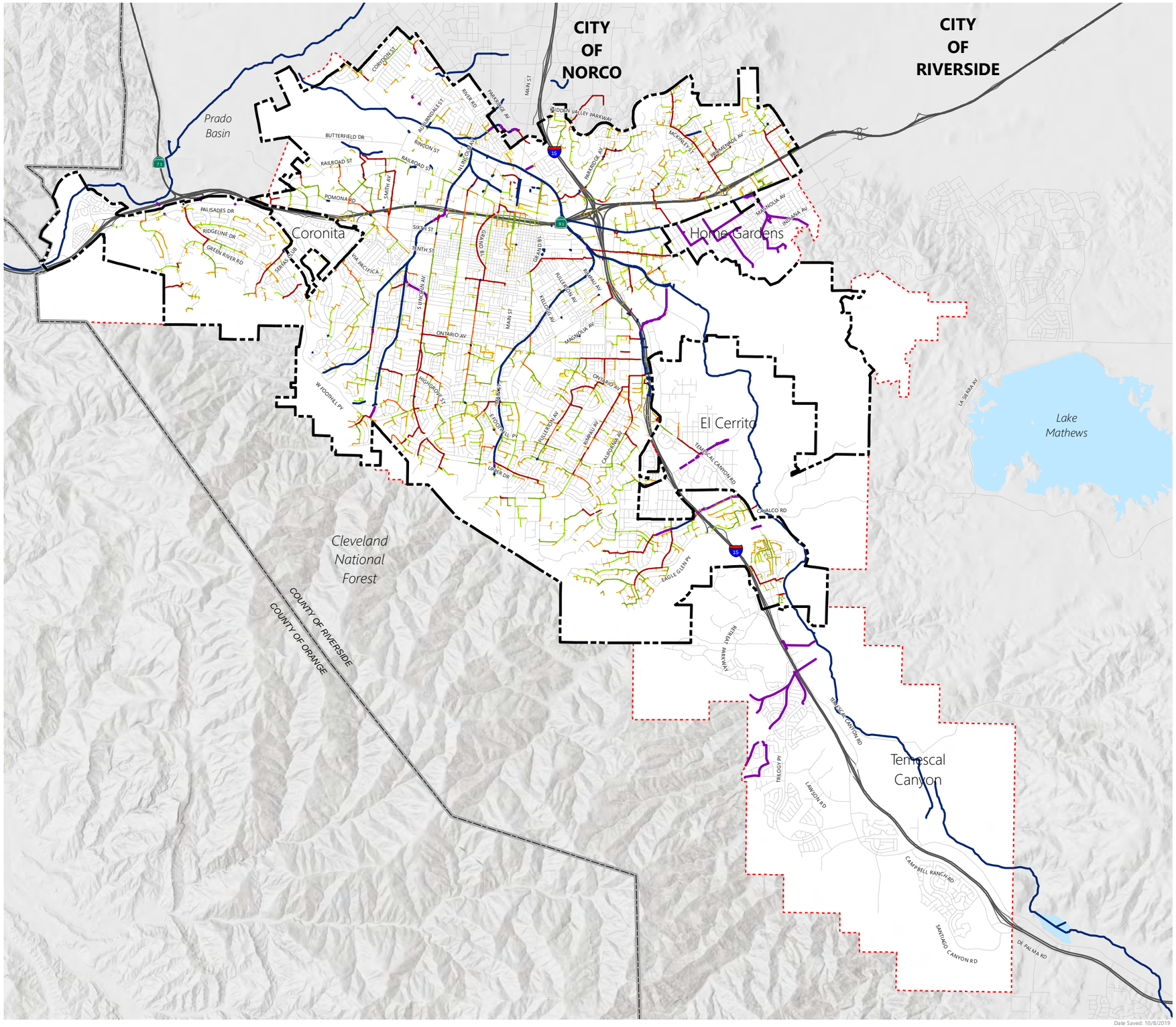
#### *City of Corona*

The storm drain system within the City is comprised of the following six main storm drain facilities:

- **Temescal Canyon Wash:** Temescal Canyon is the major watercourse and flows northwesterly through the northern half of the City. Temescal Wash joins the Santa Ana River at the site of Prado Dam, a U.S. Army Corps of Engineers flood-control reservoir. This reservoir is located at the northwestern City limits.

Figure 5.19-5

# STORM DRAIN SYSTEM




Date Saved: 10/8/2019

## Legend

- City Boundary
- Sphere of Influence Areas

**Storm Drain Lines**

- 8" to 12"
- 13" to 18"
- 20" to 29"
- 30" to 39"
- 42" to 48"
- 51" to 58"
- 60" to 124"
- Storm Drain Channels
- District Facilities (Riverside County)

*Source:*
*Fuscoe, 2017*

CORONA General Plan EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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- **Oak Street Channel:** This channel traverses generally from the Oak Street Debris Basin northerly across SR-91, and terminates at the Temescal Wash. The Channel is generally open rectangular concrete-lined section with various culvert crossings at the major streets.

- **Main Street Channel:** This channel traverses through the southeasterly corner of the City and consists of a concrete lined rectangular channel at the upstream end of the channel. This Channel joins the Temescal Wash at 6th Street.

- **Arlington Channel:** This Channel consists of vertical wall concrete-lined section that flows westerly through the Home Gardens area and joins Temescal Wash near the Atchison, Topeka, and Santa Fe (AT&SF) Railroad, north of SR-91.

- **South Norco Storm Drain:** This Drain runs from southwest of Norco through Parkridge Avenue at City limit and terminates at Temescal Wash.

- **North Norco Storm Drain:** This Drain enters City limits at River Road and terminates at Temescal Wash.

Other facilities include the Main Basin, Oak Basin, Mabey Basin, Line 36 Storm Drain, Line 7-A Storm Drain, and the Compton Avenue Storm Drain. Storm drainpipe diameters range from 12 inches to 102 inches within the City.

The City's Drainage Master Plan analyzes the capacity of its storm drain facilities and identifies deficiencies and needed capital improvements. The City uses the 10-year and 100-year design storms to assess peak runoff and the ability of the drainage system to handle anticipated flows. The City's objective is for storm drain systems to meet a 10-year storm event. For arterials, the City has adopted criteria to keep one lane open along any given roadway for the 10-year storm. For the 100-year storm, the maximum street flow depth must not exceed the street right-of-way. Ponding is not allowed at major arterial intersections for the 10-year storm. For collectors, depth of flow for 10-year storm runoff must be maintained below the curb top. Collector streets must contain the 100-year storm runoff within the existing street right-of-way.

Additionally, according to the 2003 Storm Drain Master Plan, there are approximately 289 deficient segments that require new, replaced or parallel systems to be constructed. A total of 137 areas have insufficient street capacity and 152 storm drain segments are deficient. Since the 2003 Storm Drain Master Plan, improvements have been made to the storm drain system and ongoing monitoring occurs through the City Public Works Department.

### *Riverside County*

El Cerrito and Home Gardens, are primarily covered by Riverside County storm drain facilities. The Riverside County Flood Control and Water Conservation District (RCFCWCD) maintain the primary storm drain infrastructure within El Cerrito and Home Gardens. RCFCWCD's goal is to protect people, property, and watersheds from damage or destruction from flood and stormwaters, and to conserve, reclaim, and save such waters for beneficial use. The Project Maintenance Department is charged with the daily maintenance and

emergency repair of the District drainage system. Functions range from vegetation and rodent management, to fencing repairs and graffiti removal.

The County of Riverside conducts ongoing monitoring of the storm drain system for El Cerrito. Currently, ongoing projects were planned to be completed by Fall 2018 as part of the El Cerrito Channel Restoration project. The Restoration Project seeks to replace an undersized concrete trapezoidal channel with a concrete rectangular channel running through the existing location between Ontario Avenue and Minnesota Road, and ultimately empties out into the Temescal Creek. The project expansion seeks to provide capacity for a 100-year storm event as well as provide up to two additional feet of freeboard to alleviate potential flooding and to ultimately remap the FEMA floodplain.

The main channel that flows through Home Gardens is the Arlington Channel. The County of Riverside has responsibility for ongoing maintenance and monitoring of the storm drain infrastructure in the Home Gardens DUC. Currently there are no known deficiencies in the drainage infrastructure servicing the Home Gardens area.

### *Floodplain Mapping*

According to the Flood Zone determination covering the City and SOI, the majority of the City and SOI area lies within Zone X. Zone X encompasses approximately 39,500 acres out of 42,113 total City and SOI acreage and is designated as the area determined to be outside the 500- year flood, protected by levee from 100-year flood, and with a minimal or 0.2 percent chance of flooding. In addition, a northwestern portion of the City and other intermittent parts of the City, approximately 336 acres, are designated as Zone A which represent areas with a 1 percent annual chance of flooding and a 26 percent chance of flooding over the life of a 30-year mortgage.

A large portion of the northwestern area of the City, totaling approximately 2,109 acres, is designated as Zone AE which is subject to inundation by the 1 percent annual chance flood event where mandatory flood insurance purchase requirements and floodplain management standards apply. A small portion in the north central portion of the City near the SR-91 Freeway is designated at Zone AO (approximately 4 acres) which is designated as a river or stream flood hazard area, and an area with a 1 percent or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet.

Additionally, most of El Cerrito, approximately 227 acres, lies within Zone X. Approximately 14 acres are in Zone A, while the remaining 2-acres are in Zone AE. Home Gardens is primarily designated as Zone X, 396 acres, with a minimal flood hazard and a small portion with a 0.2 percent annual chance of flood hazard. The remaining area within Home Gardens, 0.19 acres, is Zone AE.

## 5.19.3.2 THRESHOLDS OF SIGNIFICANCE

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

U-1 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.

### 5.19.3.3 RELEVANT GENERAL PLAN POLICIES

The following are relevant policies of the Corona General Plan Update, which may contribute to reduce potential storm drainage system impacts as a result of implementation of the proposed project.

#### Land Use Element

- **LU-1.4** Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)
- **LU-4.5** Manage the timing of development and allow development to occur only when public infrastructure and services needed to support that development are available, will be provided concurrently, or are committed to be provided within a reasonable time frame.
- **LU-9.10** Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.
- **LU-22.2** Ensure that annexations to the City of Corona are consistent with the goals and policies of the general plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.
- **LU-22.4** Require that infrastructure and service improvements for proposed annexation areas do not create an undue burden on existing City of Corona infrastructure and services.
- **LU-22.5** Encourage that, if an area annexes to the City of Corona, a community facilities district or similar financing district shall be established to fund the provision and maintenance of sewers, streets, and other public improvements and services.
- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

#### Housing Element

- **H-1.2** Promote specific plans that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate City services and recognition of environmental constraints.

## Infrastructure Element

- **IU-4.1** Review, evaluate, and regularly update the City's Storm Drainage Master Plan and related capital improvement programs as a basis for the orderly planning, expansion, and improvement of facilities; implement improvements identified in the Drainage Master Plan.

- **IU-4.2** Maintain and upgrade public storm drains and storage control facilities and construct or expand storm drain and flood control facilities to protect people and property from flooding and stormwater runoff. Implement improvements identified in the City's Drainage Master Plan.

- **IU-4.3** Designate, preserve, and acquire land, as necessary, for storm drainage and storage control facilities. As necessary, require the reservation of rights-of-way and easements for designated water-related infrastructure facilities as a condition of project approval.

- **IU-4.4** Evaluate the adequacy of stormwater conveyance and storage control facilities in areas where intensification of land use is anticipated to occur; coordinate capital improvements planning for infrastructure with the direction, extent, and timing of growth.

- **IU-4.5** Review development proposals for projects within the City's Sphere of Influence and encourage Riverside County to not approve any project that cannot be accommodated with an adequate drainage system.

- **IU-4.6** Annually review the development charge, acquisition of service charge, and monthly service charges in order to ensure that adequate fees and charges are collected to fund the operation, maintenance, and repair of existing facilities and construction of new facilities.

- **IU-4.7** Require adherence to City regulatory stormwater quality measures and, if needed, take necessary enforcement action(s) to eliminate illicit connections and discharges to/from the stormwater system.

- **IU-5.1** Ensure that existing and new development does not directly degrade or indirectly contribute to the degradation of surface waters or the groundwater system.

- **IU-5.2** Reduce pollutant loading through passive treatment systems such as vegetated filter strips, grass swales, and infiltration/ sedimentation areas in suitable open space areas, overland flow channels, and landscaping adjacent to parking lots and streets.

- **IU-5.3** In new developments, minimize the amount of impervious area that is directly connected to piped or channelized drainage systems.

- **IU-5.4** Evaluate any existing environmental degradation or potential degradation from current or planned storm drain and storage control facilities in wetlands or other sensitive environments.

- **IU-5.5** Require that development projects consider the appropriateness of the channelization of stormwater runoff to facilitate its possible capture and reuse for on-site irrigation and other purposes.

- **IU-5.6** Implement environmentally and economically efficient stormwater treatment systems, whenever practical (such as artificial marshland treatment).

- **IU-5.7** Require developers to obtain a NPDES permit prior to moving construction equipment onto a development site. The NPDES permit shall be retained at the construction site throughout the construction period, and a copy shall be filed with the City Engineer.

- **IU-5.8** During construction projects, ensure compliance with all terms and conditions outlined in the NPDES permit, including the implementation of the latest best management practices and determination of need for any additional water quality management plans to reduce pollutants and urban runoff flows to the maximum extent practicable.

- **IU-5.9** Require that new developments employ the most efficient drainage technology to control drainage and minimize damage to environmentally sensitive areas.

- **IU-5.10** Require that individual project owners and operators handle, store, apply, and dispose of all pest control, herbicide, insecticide, and other similar substances according to all federal, state, and local regulations.

### 5.19.3.4 ENVIRONMENTAL IMPACTS

**Impact 5.19-3: Existing and/or proposed storm drainage systems are adequate to serve the drainage requirements of the proposed project. [Threshold U-1 (part)]**

#### General Plan

Portions of the City and SOI are vulnerable to flooding. To prevent and control flowing, the City prepared a Strom Drain Master Plan which provided three deficiency remedies – install new systems, replacing systems, and installing parallel systems – to prevent and control flooding. Figure 5.19-5 shows the existing storm drain system throughout the City and the SOI.

The City DWP provides references on the NPDES residential, industrial/commercial, and construction/WQMP guidelines in order to regulate the types of discharge that enter the storm drain system. Future individual developments built according to the proposed General Plan Update would also require an assessment of how the project would affect the existing and proposed storm drain system. Necessary storm system improvements would be required for each project. Both Priority and Non-Priority projects must develop a project-specific Water Quality Management Plan (WQMP) that describes the menu of BMPs chosen for the project to minimize site runoff, as well as include operation and maintenance requirements for all structural and any treatment control BMPs. Funding for drainage facilities would come from development impact fees collected under Chapter 16.23, *Development Impact Fees,* of the City's Municipal Code.

In addition, the General Plan Update includes several policies to reduce stormwater runoff and ensure sufficient infrastructure is installed in new development, such as Policy IU-5.9 which requires that new developments employ the most efficient drainage technology to control drainage and minimize damage to

environmentally sensitive areas. Therefore, the policies of the General Plan Update, as well as the improvements recommended in the Storm Drain Master Plan Update, would reduce the potential impacts of development on the drainage system within the City of Corona.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not affect storm drainage system in the City or SOI. Consequently, implementation of the City's Climate Action Plan would result in less than significant impacts to utilities and service systems.

## 5.19.3.5 EXISTING REGULATIONS AND STANDARD CONDITIONS

### Regional

- County of Riverside MS4 Permit, Drainage Area Management Plan (DAMP) and Local Implementation Plans (LIP) (NPDES Permit No. CAS618033).

### City of Corona

- City of Corona Municipal Code Chapter 13.16, Storm Drains
- City of Corona Municipal Code Chapter 13.27, Storm Water Management Discharge Controls

## 5.19.3.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.19-3.

## 5.19.3.7 MITIGATION MEASURES

No mitigation is required.

## 5.19.3.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

## 5.19.4 Solid Waste

### 5.19.4.1 ENVIRONMENTAL SETTING

#### Regulatory Framework

##### *State*

***California Integrated Waste Management Act (AB 939)***

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

***Assembly Bill 341***

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses.

***California Solid Waste Reuse and Recycling Act of 1991 (AB 1327)***

The California Solid Waste Reuse and Recycling Access Act (AB 1327, California Public Resources Code Sections 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

***California Green Building Standards Code***

Section 5.408 of the California Green Building Standards Code (Title 24, California Code of Regulations, Part 11) requires that at least 50 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

##### *Local*

***Corona Municipal Code***

Chapter 8.20, *Collection of Refuse and Recyclable Materials*, provides requirements for collecting solid waste and recyclable materials.

## Existing Conditions

### *Solid Waste Collection*

The City of Corona contracts with Waste Management Inc. (WMI) for trash and recycling services. In 2018, 256,311 tons of solid waste and 152 tons of alternative daily cover[2] from the City were landfilled (CalRecycle 2019a).

### *Landfills*

In 2018, approximately 98 percent of solid waste landfilled from the City of Corona was disposed at El Sobrante Landfill in the City of Corona and the Olinda Alpha landfill in the City of Brea. According to Riverside County Department of Waste Resources, El Sobrante Landfill is privately owned (RCDWR 2019). Olinda Alpha Landfill is operated by the Orange County Waste and Recycling Department The two landfills are described in Table 5.19-10, *El Sobrante and Olinda Alpha Landfill Capacities*.

**Table 5.19-10 El Sobrante and Frank R. Bowerman Landfill Capacities**

| Landfill | Location | Remaining Capacity (cubic yards) | Estimated Closure Date | Maximum Daily Permitted Tonnage | Actual Average Daily Disposal, tons[3] | Residual Disposal Capacity, tons per day |
|---|---|---|---|---|---|---|
| El Sobrante | 10910 Dawson Canyon Road Corona, CA 91719 | 143,977,170[1] | 2051 | 16,054 | 5,599[4] | 10,455 |
| Olinda Alpha | 1942 North Valencia Avenue Brea, CA 92823 | 34,200,000[2] | 2021 | 8,000 | 3,638[5] | 4,362 |
| Total | | 178,177,170 | NA | 24,054 | 9,237 | 14,817 |

Sources: CalRecycle 2019b; CalRecycle 2019c; CalRecycle 2019d.
1 Remaining capacity as of April 1, 2018.
2 Remaining capacity as of November 30, 2014.
3 Average daily disposal is calculated from total annual disposal in 2018; each landfill is open six days per week (assumed to be 300 days per year after deducting holidays). (CalRecycle 2019d)
4 1,679,680 (Annual tonnage) / 300 = 5,598.9 = 5,599 tons
5 1,091,393 (Annual tonnage) / 300 = 3,637.9 = 3,638 tons

Both landfills are required to comply with existing landfill regulations from federal, state, and local regulatory agencies. They are subject to regular inspections from CalRecycle and the local enforcement agencies, the RWQCB, and the South Coast Air Quality Management District.

### *Solid Waste Diversion and Recycling*

Corona's waste management efforts include waste prevention (or "source reduction"), recycling and composting, and combustion or disposal of waste into landfills. Corona's waste management efforts center around the following programs: mandatory recycling for residential, commercial and multifamily uses;

[2] Alternative daily cover means cover material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging.

household hazardous waste and electronic waste program; organics, mulch, compost, and tree recycling; bulky item pickup; waste oil/filter program; and construction and demolition recycling. As of 2017, there were 41 solid waste diversion programs in the City of Corona, including those for composting, household hazardous waste collection, public education programs, recycling, source reduction at businesses and schools, and special waste materials such as tires and concrete/asphalt/rubble (CalRecycle 2019e).

Compliance with the diversion requirement in AB 939 is measured in part by comparing actual disposal rates with target disposal rates; disposal rates at or below target rates are consistent with AB 939. For 2015, the latest year for which data was approved, the target disposal rates for Corona were 8.6 pounds per day (ppd) per resident, and 18.6 ppd per employee; actual disposal rates in 2015—6.7 ppd per resident and 15.5 ppd per employee—were below target rates and thus were consistent with AB 939 (CalRecycle 2019f).

### 5.19.4.2 THRESHOLDS OF SIGNIFICANCE

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

U-4 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.

U-5 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

### 5.19.4.3 RELEVANT GENERAL PLAN POLICIES

The following are relevant policies of the Corona General Plan Update, which may contribute to reducing potential solid waste impacts as a result of implementation of the proposed project.

#### Infrastructure Element

- **IU-6.1** Provide an adequate and orderly system for collection and recycling or disposal of solid waste for new and existing development in the City and sphere of influence.
- **IU-6.2** Monitor the adequacy of solid waste collection and recycling, including organic and electronic waste, for commercial, industrial, and residential developments for compliance with state law.
- **IU-6.3** Coordinate with Riverside County to ensure the City's continued use of the El Sobrante Landfill and adherence to county, state, and federal environmental regulations and local priorities.
- **IU-6.4** Encourage and support local, regional, and statewide efforts to reduce the solid waste stream; implement a waste reduction and recycling program within all City offices and facilities.
- **IU-6.5** Continue to operate and expand source reduction, reuse, recycling, and composting efforts to continue to reduce waste generation citywide and achieve state-mandated waste diversion goals.

- **IU-6.6** Continue and enhance public educational programs promoting reuse, recycling, composting, and the safe disposal of waste.

- **IU-6.7** Continue to work with providers and businesses to educate the community and to provide household hazardous material, used oil, and electronic waste collection for the community.

### 5.19.4.4 ENVIRONMENTAL IMPACTS

**Impact 5.19-4: Existing and/or proposed facilities would be able to accommodate project-generated solid waste and comply with related solid waste regulations. [Thresholds U-4 and U-5]**

#### General Plan

As shown in Table 5.19-11, *Corona Solid Waste Generation*, the General Plan Update would result in an increase of 63,900 tons per year (approximately 175 tons per day).

Table 5.19-11 Corona Solid Waste Generation

| Waste Type | Existing (2018) Disposal (Tons/Year)[1] | | | Annual Disposal Rate per Service Population (SP)[2] | General Plan Buildout Disposal (Tons/Year) | Increase (Tons/Year) |
|---|---|---|---|---|---|---|
| | City[1] | SOI | TOTAL | | | |
| Waste Generation | 214,228 | 37,717 | 251,945 | 0.906 | 315,809 | 63,864 |
| Alternative Daily Cover (ADC) | 119 | 21 | 140 | 0.001 | 176 | 36 |
| Total Waste Disposal | 214,347 | 37,738 | 252,086 | 0.907 | 315,985 | 63,900 |

Sources: CalRecycle 2019a
Service Population (SP) – population and employment
[1] Based on an average 2016-2017 disposal rates identified by CalRecycle for the City of Corona. Estimated for the SOI based on the average disposal rate.
[2] Annual disposal rate are calculated based on the average 2016-2017 disposal for the City divided by the total existing population (165,366) and employment (70,972) in the City. Totals may not add up to 100 percent due to rounding.

The two landfills accepting the majority of landfilled solid waste from Corona have a total remaining capacity of 178,177,170 cubic yards, and a combined residual daily disposal capacity of 14,817 tons per day. The estimated closing dates of the landfills are 2051 and 2021. The County of Riverside is required to maintain 15 years' identified disposal capacity, or have a plan to transform or divert its waste, pursuant to AB 939. Thus, while General Plan buildout could occur after 2051 and 2021, the County would be required to have 15 years identified disposal capacity after that date. There is adequate landfill capacity in the region for solid waste that would be generated by the General Plan Update buildout, and impacts would be less than significant.

Additionally, the following General Plan policies would reduce the amount of solid waste disposed of in landfills:

- **IU-6.4** Encourage and support local, regional, and statewide efforts to reduce the solid waste stream; implement a waste reduction and recycling program within all City offices and facilities.

- **IU-6.5** Continue to operate and expand source reduction, reuse, recycling, and composting efforts to continue to reduce waste generation citywide and achieve state-mandated waste diversion goals.

- **IU-6.6** Continue and enhance public educational programs promoting reuse, recycling, composting, and the safe disposal of waste.

Additionally, new development projects approved by the City of Corona pursuant to the General Plan Update would contain storage areas for recyclable materials in conformance with California Public Resources Code Sections 42900 et seq., and City of Corona Municipal Code Chapter 8.20, *Collection of Refuse and Recyclable Materials*. Solid waste diversion programs in the City would continue operating and would have adequate capacity to accept all future wastes and recyclables to reduce landfilled waste.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. Measure 8.1, *Reduce Waste to Landfills,* of the CAP aims at decreasing GHG emissions by reducing solid waste generation. Potential actions of this measure include promoting waste recycling and diversion in the community and adding additional recycling containers in public places where possible and needed. Consequently, implementation of the City's Climate Action Plan would result in beneficial impacts to solid waste disposal from efforts to reduce landfilling of solid waste.

## 5.19.4.5 EXISTING REGULATIONS AND STANDARD CONDITIONS

### State

- California Public Resources Code 40050 et seq.: Integrated Solid Waste Management Act of 1989

- California Public Resources Code Sections 42900 et seq.: California Solid Waste Reuse and Recycling Access Act

- Assembly Bill 341 (Chapter 476, Statutes of 2011)

- Title 24, California Code of Regulations, Part 11 (California Green Building Standards Code), Section 5.408

### City of Corona

- City of Corona Municipal Code Chapter 8.20, *Collection of Refuse and Recyclable Materials*

## 5.19.4.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.19-4.

### 5.19.4.7 MITIGATION MEASURES

No mitigation is required.

### 5.19.4.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

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# 5.20 WILDFIRE

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Corona General Plan Update to exacerbate wildfires in the City of Corona and its sphere of influence (SOI). Cumulative impacts related to wildfire are based on regional wildfire hazards in the southern California region associated with proximity to wildlands and are based on Fire Hazard Severity Zones (FHSZ) mapped by the California Department of Forestry and Fire Protection (CAL FIRE). The analysis in this section is based in part on:

- *City of Corona General Plan Update Technical Background Report*, 2019.

A complete copy of this report is included as Appendix N to this DEIR.

## 5.20.1 Environmental Setting

### 5.20.1.1 REGULATORY FRAMEWORK

#### Federal

##### *National Fire Protection Association Standards*

National Fire Protection Association (NFPA) codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. NFPA standards are recommended (advisory) guidelines in fire protection but are not laws or "codes" unless adopted or referenced as such by the California Fire Code or local fire agency. Specific standards applicable to wildland fire hazards include, but are not limited to:

- **NFPA 1141**, Fire Protection Infrastructure for Land Development in Wildlands
- **NFPA 1142**, Water Supplies for Suburban and Rural Fire Fighting
- **NFPA 1143**, Wildland Fire Management
- **NFPA 1144**, Reducing Structure Ignition Hazards from Wildland Fire
- **NFPA 1710**, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations

#### State

##### *CAL FIRE*

CAL FIRE is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. The Board of Forestry and Fire Protection is a regulatory body within CAL FIRE. It is responsible for developing the general forest policy of the state, for determining the guidance policies of the Department and for representing the state's interest in federal forestland in California. The Board of Forestry and Fire Protection

also promulgates regulations and reviews general plan safety elements that are adopted by local governments for compliance with statutes. Together, the Board and the CAL FIRE protect and enhance the forest resources of all the wildland areas of California that are not under federal jurisdiction.

### *Office of State Fire Marshal*

The California Office of the State Fire Marshal supports the mission of CAL FIRE by focusing on fire prevention. Its fire safety responsibilities include: regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death and destruction by fire; by providing statewide direction for fire prevention within wildland areas; by regulation hazardous liquid pipelines; by developing and reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities. These achievements are accomplished through major programs including engineering, education, enforcement and support from the State Board of Fire Services.

### *California Government Code*

The State of California maintains responsibility for the prevention and suppression of wildfires on land outside incorporated boundaries of a city. In 1991, the State Legislature adopted the Bates Bill (Government Code §§ 51175–51189) following the fires in the Oakland Hills. The bill requires CAL FIRE to identify and classify areas in local responsibility areas (LRA) that have a "very high fire severity" hazard for wildfires. LRAs are areas where local governments have the primary responsibility for preventing and suppressing fires. A local agency is required to adopt CAL FIRE's findings within 120 days of receiving recommendations from CAL FIRE, pursuant to Government Code § 51178(b), or propose modifications in accordance with state law. The VHFHSZs are currently being updated, due in part to the recent 2017 fire season.

### *California Fire Code*

The California Fire Code is a series of building, property, and lifeline codes in the California Code of Regulations, Title 24, Chapter 9. The California Fire Code contains fire-safety-related building standards, such as construction standards, vehicular and emergency access, fire hydrants and fire flow, sprinkler requirements, etc. Specific chapters relevant to wildfire include Chapter 49, Requirements for Wildland-Urban Interface, and Chapter 7A of the California Building Code, Materials and Construction Methods for Exterior Wildfire Exposure. Corona adopts the updated Fire Code and numerous appendices B, C, E, F, and G but not the voluntary Appendix D standards every three years. Amendments are also made to the Code, including requirements for property addressing and signage, Class A roofing, automatic fire alarm and sprinkler system installation fire hydrants, eave protection, and fire flow and access.

### *California Public Resources Code*

The Board of Forestry and Fire Protection is authorized in the Public Resources Code (§§ 4290 and 4291) to adopt minimum fire safety standards for new construction in VHFHSZs in SRAs. The Board published its fire safety regulations in the California Code of Regulations, Title 14. (These standards may differ from those in Appendix D of the California Fire Code.) Fire safe regulations currently address:

- Article 1: Administration of ordinance and defensible space measures (Chapter 49)
- Article 2: Emergency access and egress standards (roadways) (Appendix D)
- Article 3: Standards for signs identifying streets, roads, and buildings (Chapter 5)
- Article 4: Emergency water standards for fire use (Appendix B, BB)
- Article 5: Fuel modification standards (Chapter 49)

Local ordinances adopted by local governments cannot be less restrictive than the provisions in state law. These regulations would be applied in SRAs outside of the City's boundaries, such as the SOI and surrounding unincorporated lands.

### *California Building Code*

The California Building Code requires the installation and maintenance of smoke alarms in residential dwelling units:

- **CCR Title 24, Part 2, Section 907.2.11.2.** Smoke alarms shall be installed and maintained on the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms. In each room used for sleeping purposes, and in each story within a dwelling unit. The smoke alarms shall be interconnected.

### *California General Plan Law, OPR General Plan Guidelines*

Government Code § 65302 requires that safety elements be revised periodically to address wildfire risks in accordance with regulations and guidance promulgated by the Board of Forestry and Fire Protection. In addition, cities must submit a revised safety element to the Board for consideration and comments no later than 90 days prior to its adoption. Local governments must also respond to how they plan to address the Board's comments or make findings to the contrary prior to adoption of the safety element.

To meet the intent of state law, SB 1241 requires the safety element to:

- Identify wildfire hazards with the latest state-prepared, very high fire severity zone maps from the Board of Forestry and Fire Protection, US Geological Survey, and other sources.

- Consider guidance given by the Office of Planning and Research's (OPR) Fire Hazard Planning document (OPR 2015).

- Demonstrate that the City or contract agency and associated codes satisfactorily address adequate water supply, egress requirements, vegetation management, street signage, land use policies, and other criteria to protect from wildfires.

- Establish in the safety element (and other elements that must be consistent with it) a set of comprehensive goals, policies, and feasible implementation measures for protection of the community from unreasonable risks of wildfire.

## Regional

### *CAL FIRE's County of Riverside Unit Strategic Plan*

CalFire prepares a California Fire Strategic Plan to govern operations statewide. The California Strategic Plan is implemented through individual "unit plans" that are prepared for different regions of the state. CAL FIRE's fire suppression operations are organized into 21 units that geographically follow county lines. CAL FIRE has adopted a Riverside Unit Fire Plan that covers Riverside County. The unit plan sets forth the agency's priorities for the prevention, protection, and suppression of wildfires. The overall goal of the Riverside County Unit Fire Plan is to reduce total costs and losses from wildland fire in the unit by protecting assets at risk through focused pre-fire management prescriptions increasing initial attack success. The last unit plan was updated in 2018.

### *County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan*

The County of Riverside Multi-Jurisdictional LHMP identifies the County's hazards, reviews and assesses past disaster occurrences, estimates the probability of future occurrences and sets goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and man-made hazards. The LHMP contains mitigation strategies, from the Safety Element of the Riverside County General Plan (2015).

### *Riverside County Local Agency Formation Commission*

Municipal Service reviews were added to the Local Agency Formation Commission's (LAFCO) mandate with the passage of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. A service review is a comprehensive study designed to better inform LAFCO, local agencies, and the community about the provision of municipal services. Service reviews attempt to capture and analyze information about the governance structures and efficiencies of service providers and to identify opportunities for greater coordination and cooperation between providers. The service review is a prerequisite to a Sphere of Influence update and may also lead a LAFCO to take other actions under its authority.

## Local

### *Corona Standards of Coverage Study and Fire Strategic Plan*

The Corona Fire Department sets the vision, mission, business operations and guiding principles for the department by means of a strategic plan. The purpose of the strategic plan is so that the members of the organization can envision its future and develop the necessary procedures and operations to achieve that future. The strategic plan is a foundational plan that assists the department in preparing annual fiscal year budgets, master plans, and other related activities required to be performed by the department. Although the planning period is eight years, it is updated annually to assess service levels, performance, and other needed functions that may change during the course of a year.

### *Community Wildfire Planning Program*

A Community Wildfire Planning Program (CWPP) is a program that is intended to reduce wildfire risk to communities, municipal water supplies, structures, and other at-risk land uses through a collaborative process

of planning and implementing programs. Due to the recent increase in wildfire hazards, the City is undertaking a Wildland Risk Assessment to address wildland-urban interface areas in the City's canyons and foothills that are at risk from wildfire. Corona has been awarded a grant from the California Fire Safe Council to complete a CWPP in 2020. This will complement the Southwest CWPP in operation south of Corona's sphere.

### *Corona Fire Prevention Guidelines and Standards*

The Corona Fire Department prepares, adopts, and maintains fire prevention standards that apply to existing and proposed buildings, landscapes, and property. Many of these standards are the same requirements of the California Fire Code, with certain local standards being more restrictive than the state codes by adoption of local amendments to the CMC. Fire prevention standards include, but are not limited to, the following:

- Construction standards
- Guideline for Fire Flow and Hydrant Spacing
- Automatic fire sprinkler plan review and inspection
- Hazardous material use and storage
- Fuel modification requirements

### *Vegetation Management*

Vegetation management has become a key focus in fire prevention and control in California due to the periodic droughts facing many communities. The Corona Fire Department implements three vegetation management programs to reduce the potential occurrence and severity of fires on public and private property. These are:

- **Weed Abatement**. Clearing vegetation helps to prevent fires from leaving open space lands, entering the city, and threatening infrastructure, property, and people. Under a Cooperative Agreement with the California Department of Corrections and Rehabilitation (CDCR), CAL Fire operates the Prado Conservation Camp and provides weed abatement in Corona and the surrounding wildland areas. The Conservation Camp also assists in fuel clearance activities inside Chino Hills State Park.

- **Fire Hazard Abatement**. Corona's Fire Hazard Abatement Program is intended to reduce the potential of vegetation fires that can result when dry and overgrown vegetation constitute a fire hazard. The Fire Hazard Abatement Officer surveys properties and will, if a public nuisance exists, notify property owners. Violations must be abated within 30 days of the date of notice. In 2018, more than 320 hazardous vegetation issues were addressed.

- **Defensible Space Regulations**. In 2019, the City adopted the California Fire Code Section 4906, requiring hazardous vegetation and fuels around buildings and structures to be maintained in accordance with a) Public Resources Code Section 4291; b) California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 3, Section 1299, "General Guideline to Create Defensible Space"; c) Government Code, Section 51182; d) California Code of Regulations, Title 19, Division 1, Chapter 7, Subchapter 1, Section 3.07; and e) Corona's Vegetation Management Guidelines.

Responsibility for fuel break maintenance and treatment is fragmented between local, state, and federal agencies. Funding limitations have resulted in infrequent treatments. CAL FIRE's Vegetation Management Program (VMP) is a cost-sharing program authorized for SRA lands in accordance with the California Code of Regulations, Title 14 Chapter 9.8, *Chaparral Management*, Section 1560-1569.6 and Public Resources Code Subsection 4461 et. seq. The Vegetation Management Program allows private landowners to contract with CAL FIRE to use prescribed fire to further fire protection goals. As of 2019, the Board of Forestry and Fire Protection is proposing the California Vegetation Treatment Program (CalVTP) to further reduce wildfire risk on SRA lands. The Board of Forestry and Fire Protection has created a statewide fuel modification map for fuel treatment projects.

### *Corona Local Hazard Mitigation Plan*

The City adopted its 2017 LHMP pursuant to Resolution No. 2018-094 on September 5, 2018. The LHMP identifies the City's hazards, reviews and assesses past disaster occurrences, estimates the probability of future occurrences, and sets goals to mitigate potential risks to reduce or eliminate long-term risks to people and property from natural and man-made hazards. Of the 23 hazards evaluated, wildfire hazard is rated as the second highest risk. Goals and mitigation programs are provided in the hazard mitigation plan to address each of the hazards. The General Plan Safety Element will adopt, by reference, the LHMP in compliance with Assembly Bill No. 2140.

### *Corona Emergency Operations Plans*

The City of Corona has prepared an Emergency Operations Plan (EOP) to address the City's planned response to natural disasters, technological incidents, and national security emergencies. The EOP does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with such emergencies. The EOP's operational concepts focus on potential large-scale disasters that can generate unique situations requiring unusual emergency responses. The EOP's emergency management goals are:

1. Provide effective life safety measures and reduce property losses;
2. Provide for the rapid resumption of impacted businesses and community services;
3. Provide accurate documentation and records required for cost recovery efforts.

### *City of Corona Municipal Code*

The City of Corona Municipal Code covers a broad range of regulations that address building construction codes, roadway access and egress, building signage, sprinkler requirements, among other aspects, including Chapter 15.16, *Fire Hazard Severity Zones*, outlines the authority of the Fire Chief in determining Very High Fire Hazard Severity Zones (VHFHSZ) and creating a VHFHSZ map in the City of Corona. The Corona Fire Department and City building department staff work together to regulate requirements for development in the high fire hazard severity zones.

### *Building Regulations*

Table 5.20-1, *Corona and State Fire Regulations Summary*, provides an abbreviated summary fire regulations and standards and whether the City of Corona standards and codes meet and/or exceed them.

Table 5.20-1 Corona and State Fire Regulations Summary

| State Requirements Met by Corona | Corona Municipal Code Exceeding State Requirements |
|---|---|
| **Urban Fire Standards** | |
| California Fire Code<br>Appendix Chapter 4<br>Appendices B, C, E, F, & G<br>California Building Code<br>California Housing Code | Chapter 15.12, *Fire Code*<br>• Fire flow, fire hydrant spacing<br>• Premise identification<br>Chapter 15.07, *Residential Code* |
| **Wildland Fire Requirements** | |
| California Fire Code, Title 24 Part 9,<br>• Chapter 49 Wildland Area Requirements<br>• Chapter 5 Fire Service Features<br>Natural Resources Code, Title 14, Section 1280, *Fire Hazard Severity Zones*<br>California Building Code Chapter 7A, *Exterior Construction Standards*<br>Government Code 51175-51189:<br>Public Resource Code Sections 4201 through 4204, *Fire Hazard Severity Zones* | Chapter 3.36, *Fire Facilities Fees, Definition of High Fire Risk Areas*<br>Chapter 8.24, *Weed Abatement Regulations*<br>Chapter 15.04, *Class A Roofing*<br>Chapter 15.12, Eave *protection and fire roads/lanes*<br>Chapter 15.16, *Fire Hazard Severity Zones*<br>Chapter 15.18, *Abatement Regulations*<br>Chapter 15.12, *Fuel Mod Req*<br>Chapter 15.12, *Brush Clearance around roadways*<br>Chapter 15.12, *Outdoor Fireplaces* |

### *Fire Access*

Clear emergency vehicle access along well-designed roadways is essential for effective fire suppression. Such access is regulated by the City-adopted and amended CFC and Corona land development standards. City access and egress requirements are in accordance with the 2016 SRA Fire Safe Regulations. Table 5.20-2, *Corona and State Roadway Access and Egress Standards*, compares City standards with those required by the 2016 SRA Fire Safe Roadway standards.

Table 5.20-2 Corona and State Roadway Access and Egress Standards

| State Code | State Requirement | Local Code | City Requirement |
|---|---|---|---|
| PRC 1273.01 Road Width | Roads must have minimum two 10 foot traffic lanes, not incl. shoulder and striping | CMC 15.12 | Roads shall have minimum unobstructed width of at least 28' excl. shoulders |
| PRC 1273.02 Road Surface | Must be of aggregate base and support fire apparatus weighing at least 75,000 lbs | CMC 15.12 | Aggregate/concrete base to support fire apparatus of approx. 75,000 lbs |
| PRC 1273.03 Roadway Grades | Grade for all roads, streets, private lanes, and driveways shall not exceed 16% | CMC 15.12 | Fire roads cannot exceed grade of 10% unless approved by CFD |
| PRC 1273.04 Roadway Radius | Horizontal inside radius is not less than 50' | CMC 15.12 | For fire apparatus access roads shall be 25' inside and 50' outside radius |
| PRC 1273.05 Roadway Turnarounds | Minimum turning radius cannot exceed 40', not including parking. | CMC 16.08 | Must have at a minimum 50' turning radius |
| PRC 1273.06 Road Turnout | Turnouts must be designed with a minimum of 12' wide and 30' long configuration | No CMC provision | City requires turnouts to be individually designed for each project |
| PRC 1273.07 Roadway Structures | Road structures shall be designed for the maximum load & minimum clearance required by CVC. | CMC 15.12 | City follows CFC 503.2.6 requiring bridges on fire apparatus roads to support vehicle weights and have vertical clearance of 15' |
| PRC 1273.08 One-Way Roads | One-way roads must provide at least 1-12' traffic lane exclusive of shoulders | No CMC provision | City and CFD does not approve construction of new one-way roadways |
| PRC 1273.09 Dead end Roads | Limitations on length based on number and size of parcels per PRC | CMC 16.08 | City and CFD does not approve construction of new dead-end roadways; or cul-de-sacs up to 500' in length |
| PRC 1273.10 Driveways | Must provide min one 10' wide traffic lane and 14-15' horizontal/vertical clearance; turnaround over 300' | City Street Standards | One 10-foot traffic lane. Max grade 10% (residential) or 12% (comm/industrial); turnaround req. if exceeds 150' in length |
| PRC 1273.11 Gate Entrances | At least 2 feet wider than traffic lane and min. width of 14' horizontal clearance and 15' vertical clearance. | CMC 15.12 City stand. 118 | Unobstructed vertical clearance of at least 15'; and 15' horizontal clearance |

### *Fuel Modification Requirements*

In accordance with the California Fire Code Section 4906, the City requires all projects in the VHFHSZ to submit a Fuel Modification Plan. The plan must contain a wildland fire hazard and risk assessment; fire behavior modeling, assessment of structure ignition in the wildland urban interface, fuel mod zone descriptions and treatments, treatment recommendations and an approved plant pallet. Typical conditions required as part of a fuel modification plan and subdivision or development approval include, but are not limited to:

- Each homeowner is responsible for all maintained areas designated as "maintained Irrigated Defensible Space Zone" within their own lot.
- All structures shall be constructed to meet city building codes, International Wildland Urban interface codes, California fire and building codes, etc.

- All landscaping must conform to City or fuel modification standards with respect to native vegetation, thinning, and maintenance
- Home Owner's Associations (HOAs) are required to conduct annual inspections and are accountable for the enforcement of wildland protection issues

In accordance with the Corona Municipal Code Section 8.24, the Corona Fire Department also operates a Fire Hazard Abatement Program to reduce the potential of vegetation fires that can result when dry and overgrown vegetation constitutes a fire hazard. To implement this program, the Fire Hazard Abatement Officer surveys properties twice each year and will, if a public nuisance exists, notify property owners by the posting of a pink sign on the property or by letter. Property violations must be abated within 30 days of the date of notice.

### 5.20.1.2 EXISTING CONDITIONS

#### Fire Environment

The City of Corona has a complex fire environment. Corona is one of the largest cities in Riverside County and at the intersection of three counties. There are numerous businesses in Corona that use, manufacture, or store hazardous materials. The City has a housing stock of approximately 50,000 housing units, most of which are two- to four-story structures. Additional structures and uses, such as senior facilities and other group living quarters, require heightened levels of emergency medical services and fire suppression.

Furthermore, the City of Corona is surrounded by extensive open space areas that are susceptible to wildfire and encroachment into the community. The Cleveland National Forest borders the western portion of the City and is the source of many wildfires. Vegetation to the north, in the Chino and Corona Hills, and to the east, in Gavilan Hills, is susceptible to wildfire. A majority of the undeveloped area surrounding Corona has been burned by multiple wildfires and is designated a VHFHSZ by CAL FIRE.

##### *Urban Fire Environment*

As previously shown in Table 5.15-3, *Corona Fire Department Responses*, in Section 5.15, *Public Services*, from 2014 to 2018, the Corona Fire Department responded to approximately 12,500 calls annually, although the volume has increased 15 percent over the last five years. During this five-year period, the greatest percentage of calls, 74 percent, involved emergency medical service and rescue. This category is primarily responsible for the 15 percent increase in the number of service calls over the same period.

##### *Wildfire Environment*

The City of Corona has a long history of wildfires threatening the community, which include fires at the wildland-urban interface (WUI), where the urban environment extends into open areas, resulting in a complex mix of fuels, properties, and threats. WUI Fires can damage critical infrastructure, such as electrical transmission towers, railroads, water reservoirs and tanks, and communications facilities. Since 1900, numerous wildfires have encroached into Corona, although relatively few have caused significant damage to structures and infrastructure. Table 5.20-3, *Recent Wildfire History in Corona*, lists the major fires since the 1950s, and Figure 5.20-1, *Wildfire History*, maps the locations and numbers of the fires burned from 1900 through 2017.

Table 5.20-3 Recent Wildfire History in and near Corona

| Year | Fire Incident | Description |
|---|---|---|
| 2017 | Canyon Fires | Burned 2,600 acres in Corona; destroyed 25 structures outside Corona |
| 2015 | Highway Fire | Burned 1,049 acres in the Prado Basin |
| 2010 | McKinley Fire | Burned 913 acres in the Eagle Valley area |
| 2008 | Freeway Complex | Burned 30,500 acres, damaged or destroyed 314 homes |
| 2007 | Santiago Fire | Burned 27,000 acres and destroyed 12 homes |
| 2006 | Sierra Fire | Burned 10,500 acres but did not destroy or damage structures |
| 2005 | Lincoln Fire | Burned 231 acres in Eagle Valley |
| 2004 | Cerrito Fire | Burned 16,500 acres and destroyed 28 structures |
| 1999 | Chase Fire | Burned 500 acres in south Corona and destroyed 1 home |
| 1990 | Bedford Fire | Burned 4,500 acres and destroyed 20 structures |
| 1987 | Silverado Canyon | Burned 7,700 acres; no homes were destroyed or lives lost |
| 1982 | Gypsum Fire | Burned 18,000 acres and destroyed 14 homes |
| 1981 | Dawson Canyon | Burned 8,000 acres and destroyed 2 homes |
| 1980 | Indian Fire | Burned 29,000 acres and destroyed 7 homes |
| 1980 | Owl Fire | Burned 18,330 acres; no structures destroyed or lives lost |
| 1979 | Paseo Fire | Burned 2,000 acres in west Corona |
| 1977 | Tin Fire | Burned 5,500 acres and destroyed 1,600 fruit trees |
| 1967 | Paseo Fire | Burned 51,000 acres, destroyed 66 homes, killed 1 person |
| 1948 | Green River Fire | Burned 53,000 acres and destroyed 22 homes |

Source: CAL FIRE 2018

### *Weed Abatement*

As Corona is surrounded by hillsides, maintaining existing fire breaks and clearing vegetation helps to prevent wildland fires from entering the community. Under a Cooperative Agreement with the California Department of Corrections and Rehabilitation (CDCR), CAL FIRE operates the Prado Conservation Camp and provides weed abatement in Corona and the surrounding wildland areas.

### *Fire/Fuel Break Maintenance*

CAL FIRE Riverside Unit and the US Forest Service cooperate on maintaining the fuel breaks and truck trails along the Main Divide Truck Trail and down main ridgelines into the Temescal and Corona Valleys. These truck trails are vital ingress and egress routes for fire suppression resources and continual maintenance is coordinated thru cooperative agreements with state, federal and county agencies and dependent upon funding. The intent is to contain wildland fires emanating from the Cleveland National Forest from reaching urban areas such as Temecula, Corona, and others that front the forest.

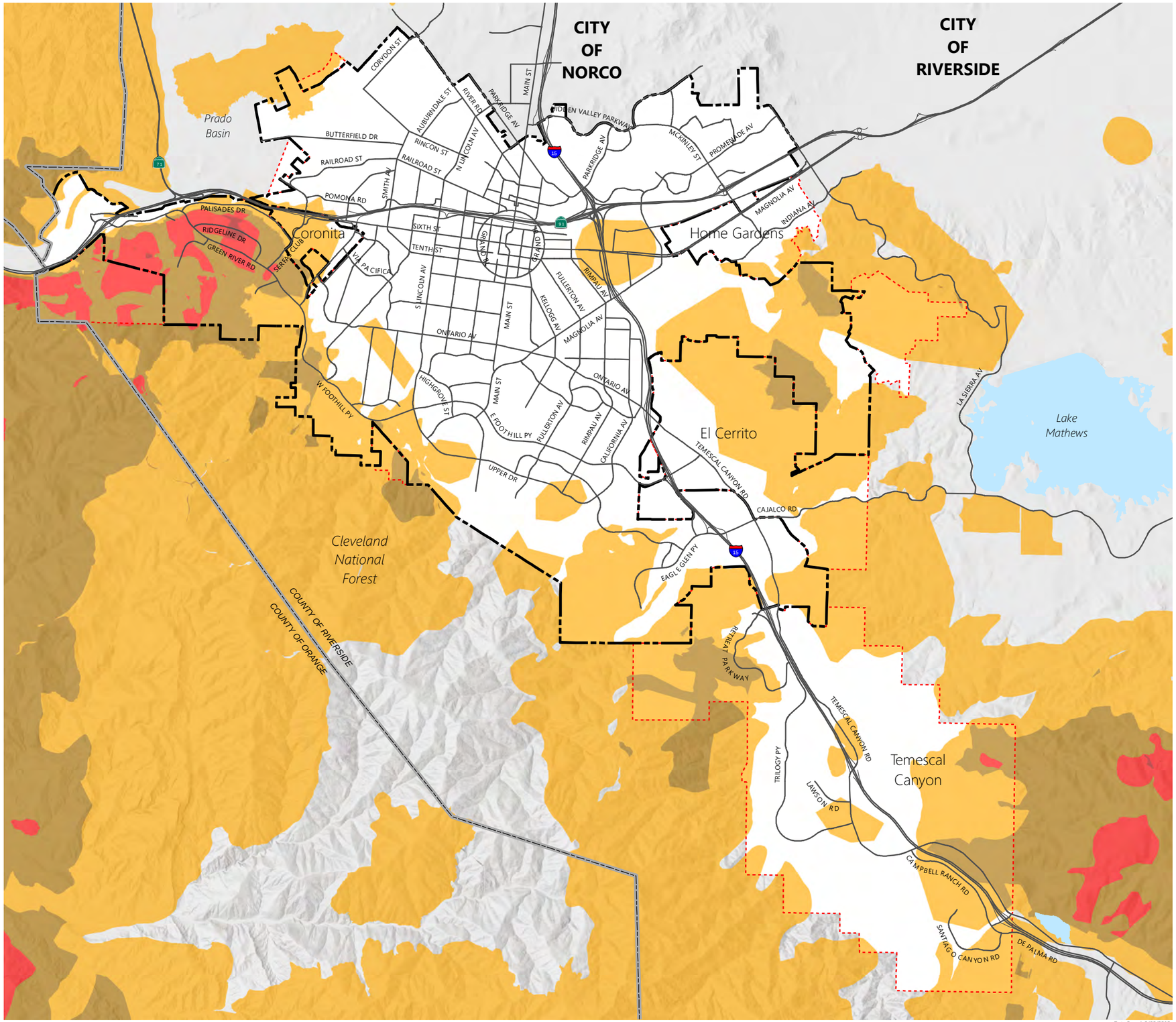


Figure 5.20-1

# WILDFIRE HISTORY

Legend

- City Boundary
- Sphere of Influence Areas

**Number of Fires Burned (1900-2017)**

- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8

*Source:*
*Fire Perimeters Version 16_1, CalFire, 2017*

CORONA General Plan EIR

Miles
0 0.5 1 1.5 2

PLACEWORKS

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### *Wildfire Hazard Severity Zones and Response*

CAL FIRE is mandated by Public Resources Code §§ 4201–4204 and Government Code §§ 51175–51189 to identify FHSZs for every community within California. The latest version dates to 2010, with revisions to be released in 2019. CAL FIRE has also mapped three hazard severity ranges—moderate, high, and very high—based on fuels, terrain, weather, and other factors for most regions of California. The City of Corona adopted its current VHFHSZ map pursuant to Ordinance No. 3034, adopted on June 3, 2010, which is consistent with CAL FIRE's determination. Additionally, in the SOI, CAL FIRE requires compliance with SB 1241 and subsequent regulations to ensure appropriate standards are met, such as building and road standards.

Government Code § 51179 allows a local agency to restrict or expand, at its discretion, the fire hazard severity zones identified by CAL FIRE. A City may: 1) exclude an area identified as a VHFHSZ from the requirements of §51182 following a finding supported by substantial evidence in the record that the § 51182 requirements are not necessary for effective fire protection in the area or 2) designate areas as a VHFHSZ in its jurisdiction that were not identified by CAL FIRE following a finding supported by substantial evidence that § 51182 requirements are needed for effective fire protection.

To address wildfire hazards and coordinate response, multiple government agencies (local, county, state, and federal) are responsible for fire suppression. These responsibility areas are generally described below.

- **Local Responsibility Area** (LRAs). These are areas where local jurisdictions (e.g., cities, districts, counties, and CAL FIRE if under contract) are responsible for the prevention and suppression of wildfires. The City covers the entire incorporated area, and the County/CAL FIRE serves portions of the sphere. The City provides secondary backup for areas covered by Riverside County Fire.

- **State Responsibility Area** (SRAs). These are the areas where the State of California has primary financial responsibility for fire prevention and suppression activities. SRA lands do not include lands within city boundaries or in federal ownership. CAL FIRE is the responsible state agency assigned to response and suppression of wildfires in Corona's SOI and surrounding areas.

- **Federal Responsibility Area** (FRAs). These are areas where the federal government has primary financial responsibility for fire prevention and suppression activities. Around Corona, the federal government (US Forest Service) is responsible for suppressing fires in the Cleveland National Forest. Typically, USFS resources are deployed solely to FRA areas, but may assist elsewhere.

## Automatic and Mutual Aid Agreements

The City of Corona actively participates in a wide range of mutual automatic aid agreements designed to improve its capability to respond to fire-related emergencies and receive assistance from neighboring agencies. Corona is under contract with the Riverside County Fire Department/CAL FIRE to provide fire protection and suppression services for the unincorporated communities of El Cerrito and Coronita. Under this contract, Corona Fire Department provides backup services to Home Gardens, secondary to the services provided by County #13 in Home Gardens. The following agencies provide mutual aid:

- USDA, Cleveland National Forest
- City of Murrieta Fire Department (Tactical Response)
- City of Rancho Cucamonga Fire Department (Tactical Response)
- March Air Reserve Base
- Cal OES Emergency Management.

The following agencies provide both automatic and mutual aid:

- City of Riverside Fire Department
- Chino Valley Independent Fire District
- Orange County Fire Authority
- Riverside County Fire Department

Figure 5.20-2, *Very High Fire Hazard Severity Zones,* illustrates the location of moderate, high, and very high fire severity zones and the corresponding responsibility area. As depicted in this figure, VHFHSZs are mapped along the southwest City boundary and the west end of the City and in adjacent parts of the SOI; in the southeast corner of the City; in much of the part of the SOI southeast of the City; and in part of the easternmost portion of the SOI east of El Cerrito.

## Fire Preplanning

Corona has wildland/urban interface areas that present challenges for fire protection and suppression. In order to adequately pre-plan for responding to issues in those areas, the Corona Fire Department has developed Structure Protection Plans (SPPs). Each SPP contains an analysis of fire behavior associated with its terrain and fuel, evacuation routes, fire infrastructure, staging areas and tactical response, communications, and resources, needed to address wildfires in the area. SPPs are available for the following areas:

- Corona Hills
- River-Corydon
- Butterfield Railroad
- Prado-Green River
- Fresno-Mindiman
- Mabey-Mangular
- Hagador Tin Mine
- Main Street-Mountain Gate
- Eagle Joseph-Crown Ranch
- Bedford Canyon-Eagle Glen
- McBride/Weirick

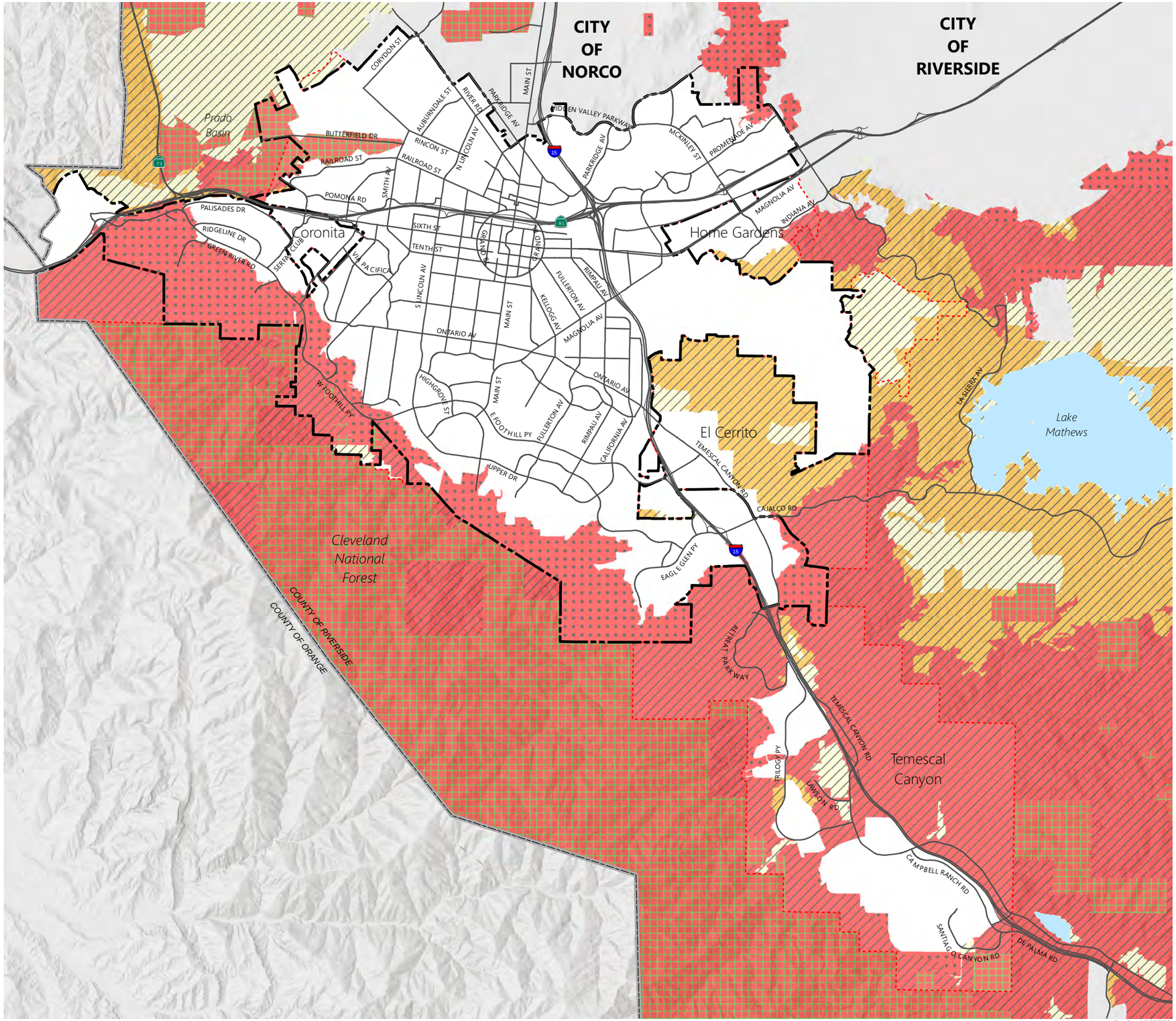


Figure 5.20-2

# VERY HIGH FIRE HAZARD SEVERITY ZONES

## Legend

- City Boundary
- Sphere of Influence Areas

**Resposibility Areas**

- Local Responsibility Area
- State Responsibility Area
- Federal Responsibility Area

**Fire Hazard Severity Zones**

- Moderate
- High
- Very High

Note:
Zones based on factors such as fuel (material that can burn), slope and fire weather.

Local Responsibility Area (LRA):
Local agencies have the primary financial responsibility for the prevention and suppression of wildland fires.

State Responsibility Area (SRA):
The State of California has the primary financial responsibility for the prevention and suppression of wildland fires.

Federal Responsibility Area:
Federal Government hasthe primary financial responsibility for the prevention and suppression of wildland fires.

*Source:*
*CalFire, 2017*
*http://www.fire.ca.gov/fire_prevention/fhsz_maps_riversidewest*
*Downloaded: 9/26/17*

CORONA
General Plan
EIR

0 0.5 1 1.5 2 Miles

PLACEWORKS

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Wildland-interface areas in Corona have unique fire protection and suppression needs. These are the result of a limited number of nonconforming structures, natural terrain and fuel modification needs, road access limitations, and other fire protection or suppression response. The Corona Fire Department has obtained grants to begin a process leading to the preparation of a Community Wildfire Protection Plan (CWPP) that will continue to improve safety in the wildland-interface areas.

## Postfire Debris Flow

Wildfires on hillsides can create hazards in the form of mud or debris flows. A debris flow is a form of slope failure and slippage, where a moving mass of loose mud, sand, soil, rock, vegetation, and water travels down a slope under the influence of gravity. Debris or mud flows occur most frequently on hillsides that have little to no vegetation and are most common following wildfires and as a result of storm events. Debris flows have a history of occurrence in southern California, some with devastating consequences.

As part of its landslide hazard program, the USGS prepares postfire debris flow maps of major wildfires that document the likelihood of debris flows during a storm event. Maps indicate estimates of the likelihood of debris flow, their potential volume, and the combined relative debris flow hazard. These predictions are made at the scale of the drainage basin and for individual stream segment. Estimates are based upon a design storm with a peak 15-minute rainfall intensity of 24 millimeters per hour.

In 2017, the City of Corona and Anaheim experienced two large fires, the Canyon I (Corona) and Canyon II fires (Anaheim Hills). The USGS prepared debris flow hazard maps for both events, showing a moderate basin hazard. The potential volume of the flow in Corona can range from 1,000 to 100,000+ cubic meters. During the winter storms that followed the fire season, Corona and Anaheim both experienced mud and debris flows within neighborhoods near the fire areas and along the SR-91.

## Fire Protection Services

Refer to Section 5.15, *Public Services*, for information on fire protection resources. The Corona Fire Department is "all risk" department, responding to fires, medical emergencies and hazardous conditions and serves the City of Corona and communities of Corona, El Cerrito, and Home Gardens through a service agreement with the County of Riverside. The Corona Fire Department also participates in mutual, automatic and contractual aid. Within the broader Temescal Valley, service calls are responded to by Riverside County Fire Department. See Figure 5.15-1, *Fire Response Zones*, for areas in the City and SOI served by the Corona Fire Department and the Riverside County Fire Department.

## Evacuation Routes

Corona's location makes it susceptible to wildfires, earthquakes, and floods. Most major roadways and transit systems within or exiting the community are crossed by one or more disaster prone areas–including Alquist Priolo, VHFSZs, and 100-year flood zones. These disasters can cause significant damage to transportation infrastructure, preventing or impeding access by emergency responders and evacuation by residents. Regional access is limited to the I-15 and SR-91, both which can be affected by wildfires.

For areas located at the wildland/urban interface, the City has Structure Protection Plans (SPPs) to address the evacuation routes. The Riverside County Strategic Contingency Plan that coincides with the Corona SPP incorporates these routes. The Corona Fire Department in partnership with CAL FIRE has published its *Ready, Set, Go! Wildfire Action Plan* to give citizens the tools needed to prepare for such an event. The City makes available the timely notification of wildland fires and debris flows. The City, along with Cassidian Communications, offers a local notification system that sends telephone notifications to residents and businesses within the community. Corona also maintains a CERT program where community members learn the various hazards they are most susceptible to in their local jurisdiction, preparedness methods, mitigation efforts and the various types of evacuations, with an emphasis that direction/route can easily change and is incident driven.

## 5.20.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if located in or near state responsibility areas or lands classified as very high fire hazard severity zones the project would:

W-1 Substantially impair an adopted emergency response plan or emergency evacuation plan.

W-2 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.

W-3 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.

W-4 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.

## 5.20.3 Relevant General Plan Policies

The following are relevant policies of the Corona General Plan Update, which may contribute to reducing potential wildfire impacts as a result of the proposed project:

### Land Use Element

- **LU-2.1** Locate and design development to reflect Corona's unique physical setting considering its natural topography, environmental resources, natural hazards, and opportunities for views in accordance with this plan's policies.

- **LU-4.3** Allow for the development of vacant lands on the periphery of existing development that complements the scale and pattern of existing uses; protects significant plant, animal, and other natural environmental resources; protects development and population from natural hazards; and where it is logical and feasible to extend infrastructure.

- **LU-16.1** Accommodate open spaces that can be used for recreation and conserved to protect significant plant and animal habitats and population from the risks of flood, fire, and seismic hazards in accordance with the designations of the land use plan.

- **LU-16.7** Work with Corona Fire, CAL FIRE and Forest Service and with property owners in affected areas to reduce and minimize the hazards associated with wildfire in the hillsides and open spaces, consistent with the goals and policies of the safety element.

- **LU-22.10** Collaborate with local, county, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

### Circulation Element

- **CE-1.12** Provide all residential, commercial, and industrial areas with efficient and safe access for emergency vehicles, including undeveloped areas or those on the hillsides in high or very high fire hazard severity zones.

### Public Safety Element

#### *Fire Hazards*

- **PS-7.1** Require larger developments to incorporate site design features that help ensure maximum visibility and security for entrances, pathways, streets and sidewalks, corridors, public and private open space, and parking lots and structures.

- **PS-7.2** Require the incorporation of appropriate lighting that provides adequate exterior illumination around commercial, business park, public spaces, parking lots, and multifamily structures.

- **PS-7.3** Work with traffic engineers to develop methods through design, enforcement, and engineering to reduce the volume and severity of vehicle, pedestrian, and bicycling accidents citywide and around sensitive land uses such as schools, apartments, and other highly traveled uses.

- **PS-7.4** Enhance public awareness and participation in crime prevention by encouraging changes to be made through crime prevention by design (vegetation selection and maintenance, motion sensors, lighting, etc.) and establishing and participating with police in neighborhood safety and crime prevention programs (e.g. neighborhood watch).

- **PS-7.5** Require large-scale retail developments to incorporate video surveillance security systems within their facilities and grounds to monitor open public spaces and, where appropriate and feasible, provide office space for police facilities.

- **PS-7.6** Provide opportunities for police department review and input regarding appropriate methods to mitigate the impacts of land use permits that have functions and characteristics that may impose a higher than normal level of security and police protection.

- **PS-7.7** Provide appropriate security measures around sensitive essential public facilities, such as water, reclaimed water, radio towers, and other facilities required for use for public health and safety purposes.

- **PS-8.1** Provide needed fire stations and maintain them in good condition to enable timely and effective response to emergencies in keeping with city standards, community service expectations, and city financial resources.

- **PS-8.2** Ensure that fire staff at all levels are sufficient in number and appropriately trained to effectively plan and respond to all types of fire and related emergencies in the community.

- **PS-8.3** Maintain mutual aid, automatic aid, and other multi-agency cooperative agreements to ensure that urban fire, wildfire, tactical response, hazmat, and other services are available at all times.

- **PS-8.4** Regular maintain, upgrade, and replace fire apparatus and support vehicles and needed equipment to be prepared and effectively respond to fire, traffic, medical, and related emergencies.

- **PS-8.5** Conduct periodic fire-related exercises with City public safety personnel and those of nearby jurisdictions, and the state to remain prepared for situations requiring multi-jurisdictional coordinated response.

- **PS-8.6** Participate in and conduct regular training of all fire and related personnel to ensure that staff are prepared to address emergency medical, fire, and other related emergencies in the community.

- **PS-8.7** Adhere to and periodically update fire department strategic plans, policies and procedures, and other internal standards to continuously meet service level requirements and priorities, including department response times.

- **PS-8.8** Ensure that revenues are collected from new development, existing developments, and other land uses in an amount that is commensurate with their respective impact on overall city fire operations.

- **PS-8.9** Continue to monitor and adhere to the latest changes in state legislation and guidelines with respect to fire planning, prevention, and suppression.

- **PS-9.1** Continue to review and adopt the most recent edition of the California Building Standards Code (Title 24), including local amendments, to ensure the use of the latest technology and building standards in the city.

- **PS-9.2** Continue to conduct all existing occupancy inspections, including those that are state mandated within the appropriate time frame for compliance with fire safety regulations and providing education to business owners.

- **PS-9.3** Ensure that roadway, bridge and driveway standards are adequate and appropriately maintained to allow safe access to premises where emergencies take place and safe evacuations wherever needed.

- **PS-9.4** Maintain safe and accessible evacuation routes throughout the community; take precautions and ensure backup or mitigations for routes crossing high hazard areas (e.g., flood, seismic, high fire, etc.).

- **PS-9.5** Work cooperatively with city departments, community groups, and individual homeowners to ensure that vegetation management is being maintained in the designated fuel modification areas.

- **PS-9.6** Work cooperatively with CAL FIRE, US Forest Service, Department of Corrections, and other agency stakeholder to advocate for the installation and maintenance of fire breaks in wildland areas surrounding Corona.

- **PS-9.7** Encourage and provide fire safety education and support programs for residents of all ages to promote participation, fire prevention, voluntary compliance, and community awareness/preparedness.

- **PS-9.8** Work with youth in the community and local school district to tailor programs that encourage safe practices and reduce the incidence of fire and associated damages to property and personal injury.

- **PS-9.9** Conduct fire investigations as needed on residential, commercial, industrial structures and other land uses to provide protection to the community and gather information for possible trending issues.

- **PS-10.1** Locate, when feasible, new essential public facilities outside of high fire risk areas; if not feasible, require construction and other methods to harden and minimize damage for existing/planned facilities in such areas.

- **PS-10.2** Require all improved and new homes, structures, and facilities in the very high fire hazard severity zones to adhere to additional fire safe design standards consistent with state law and local practice.

- **PS-10.3** Require all improved and new developments to be thoroughly reviewed for their impact on safety and the provision of fire protection services as part of the development review process.

- **PS-10.4** Require new and rehabilitated homes and structures to meet or exceed City fire prevention standards and state law, including building access, construction design, sprinklers, and others as required by Corona Fire.

- **PS-10.5** Require all new commercial, industrial, institutional, multiple-unit housing, mixed-use, and one- and two-family dwelling developments to install fire protection systems and encourage the use of automatic sprinkler systems where not required by local codes and ordinances.

- **PS-10.6** Require fuel modification plans and vegetation clearance standards for development in VHFHSZs to protect structures from wildfire, protect wildlands from structure fires, and provide safe access routes for the community and firefighters.

- **PS-10.7** Condition approval of parcel maps and tentative maps in VHFHSZs based on meeting or exceeding the SRA Fire Safe Regulations and the fire hazard reduction around buildings and structures regulations.

- **PS-10.8** Coordinate with the Department of Water and Power to ensure that adequate water supply and flows are available for firefighting; where inadequate, ensure provision of off-site water supply and transport.

- **PS-10.9** Continue to require visible premise identification and signage per Corona's Premise Identification Guideline that meet or exceed SRA and CFC requirements.

### *Emergency Management*

- **PS-11.1** Adhere to the Standard Emergency Management System (SEMS) and the National Incident Management System (NIMS) to coordinate effective response to emergencies and disasters.

- **PS-11.2** Maintain emergency and hazard mitigation plans; update and define roles of city departments and other partnering agencies in the event of an emergency or disaster, ensuring interagency coordination and collaboration with the Operational Area (SEMS).

- **PS-11.3** Conduct periodic emergency management exercises with city personnel and nearby jurisdictions to remain prepared for situations requiring multi-jurisdictional coordinated response.

- **PS-11.4** Maintain Structure Protection Plans and other pre-planning activities and plans to remain prepared for emergencies throughout the community.

- **PS-11.5** Ensure that the Emergency Operations Plan and Standard Operating Procedures provide for efficient and orderly notification and evacuation on a citywide basis. Ensure they address accessibility issues and mass notification capabilities utilizing our city, county, state, and federal communication systems.

- **PS-11.6** Improve continuity of operations capabilities to include the development of a City of Corona Continuity of Operations Plan, in addition to enhancing the Emergency Operation Center (EOC) readiness and the EOC responder training and exercises, and continuously testing and improving upon the effectiveness of the Emergency Operation Plan.

- **PS-11.7** Sponsor and support the public education programs and outreach efforts referencing community hazards, emergency preparedness, and response protocols and procedures. Target and partner with community groups, schools, religious institutions, and business associations (NIMS).

- **PS-11.8** Facilitate planning efforts to ensure expeditious and coordinated recovery processes following any serious emergency/disaster.

- **PS-11.9** Ensure all local, state, and federal mandates are adhered to should the City proclaim a local emergency and request any state and/or federal funding.

- **PS-11.10** Participate in the review and update of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan every five years in coordination with all participating jurisdictions and Riverside County Emergency Management Department; implement goals and objectives therein to reduce risks from hazards and guide decision-making.

- **PS-10.11** Ensure all local, state, and federal mandates are adhered to should the City proclaim a local emergency and request any state and/or federal funding.

- **PS-10.12** Participate in the review and update of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan every five years in coordination with all participating jurisdictions and Riverside County Emergency Management Department; implement goals and objectives therein to reduce risks from hazards and guide decision-making.

## 5.20.4 Environmental Impacts

### 5.20.4.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.20-1: Buildout of the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. [Threshold W-1]**

#### General Plan

The City of Corona has prepared an Emergency Operations Plan (EOP) to ensure the most effective allocation of resources for the maximum benefit and protection of the civilian population in time of emergency. In addition, the City's Local Hazard Mitigation Plan (LHMP) is designed to identify local hazards and provide mitigation measures to address these hazards. Buildout of the proposed General Plan would not result in substantial changes to the circulation patterns or emergency access routes in the City or SOI identified in the City's LHMP and EOP. As stated in Chapter 5.15, *Public Services,* currently the Corona Fire Department cannot meet its response time goals[1] in the periphery.

Emergency management functions are coordinated through the Emergency Management Division, under the Corona Fire Department. The Corona Fire Department adheres to the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). During an emergency, many activities essential during the response phase are conducted in tandem with standard emergency response procedures of the Corona Police and Fire Departments. The Corona Fire Department also work with an array of community partners, including utility service providers (water, power, and sanitation), schools, community organizations, residents, and other local entities. Mutual and automatic aid agreements are also maintained with numerous surrounding local, state, and federal agencies to allow for appropriate backup services in case of an emergency, disaster, or other similar event.

The Corona Fire Department Structure Protection Plans (SPPs) identify the evacuation routes for the 12 areas within the urban-wildland interface. The Riverside County Strategic Contingency Plan that coincides with the Corona SPP incorporates these routes. The latter is a confidential document and is not available to the public. However, it is used by public safety professionals (fire, police, transit, etc.) employed by the affected

[1] The Corona Fire Department goals are 7 minutes and 30 seconds from 9-1-1 notification for initial attack units (Citygate 2019) and 6 minutes and 25 seconds for fire and special operations (Corona 2018)

jurisdictions. The City also has established evacuation plans and protocols to ensure the safe and orderly notification and evacuation of people in Corona should the need arise.

Future development would be required to comply with applicable fire and building codes. To ensure emergency services in the City and SOI are not impaired by future development, all development projects in the City and SOI are reviewed by the Corona Fire Department, prior to approval. As part of the 2019 Building Code adoption process, Corona Fire has amended the Fire Code to require two points of access for all new development and for areas proposing increased residential densities.

In accordance with the California Fire Code, the Corona Fire Department requires site design to consider fire access. Requirements include:

- Road and Building Access and Egress (see Table 5.20-2)
- Fire Flow Requirements (see Table 5.15-5 in Chapter 5.15, *Public Services*)
- Sprinklers (California Fire Code, Corona Fire Prevention Guidelines and Standards, and Corona Municipal Code)
- Building Addresses (Corona Municipal Code and Fire Prevention Standards)
- Fuel Modification/Vegetation Management (California Fire Code Section 4906)
- Building Construction Standards (see Table 5.20-1)
- Bridge Design (California Fire Code)
- Subdivision Access (Subdivision Map Act)

New development is required to abide by these regulations to provide sufficient clear emergency vehicle access. Therefore, impacts to emergency response plans or emergency evacuation plans would be less than significant.

Additionally, the following policies are identified in the General Plan Update to ensure effective emergency response:

- **PS-11.1** Adhere to the Standard Emergency Management System (SEMS) and the National Incident Management System (NIMS) to coordinate effective response to emergencies and disasters.
- **PS-11.2** Maintain emergency and hazard mitigation plans; update and define roles of city departments and other partnering agencies in the event of an emergency or disaster, ensuring interagency coordination and collaboration with the Operational Area (SEMS).
- **PS-11.5** Ensure that the Emergency Operations Plan and Standard Operating Procedures provide for efficient and orderly notification and evacuation on a citywide basis. Ensure they address accessibility issues and mass notification capabilities utilizing our city, county, state, and federal communication systems.

- **PS-11.6** Improve continuity of operations capabilities to include the development of a City of Corona Continuity of Operations Plan, in addition to enhancing the Emergency Operation Center (EOC) readiness and the EOC responder training and exercises, and continuously testing and improving upon the effectiveness of the Emergency Operation Plan.

- **PS-11.10** Participate in the review and update of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan every five years in coordination with all participating jurisdictions and Riverside County Emergency Management Department; implement goals and objectives therein to reduce risks from hazards and guide decision-making.

- **PS-10.11** Ensure all local, state, and federal mandates are adhered to should the City proclaim a local emergency and request any state and/or federal funding.

- **PS-10.12** Participate in the review and update of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan every five years in coordination with all participating jurisdictions and Riverside County Emergency Management Department; implement goals and objectives therein to reduce risks from hazards and guide decision-making

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not impair emergency response plans or emergency evacuation plans. The CAP focuses on increasing energy efficient in existing and new residential and commercial units. Consequently, implementation of the City's CAP would result in less than significant impacts to wildfires.

**Impact 5.20-2: The proposed project would not exacerbate wildfire risks due to slope, prevailing winds, and other factors, thereby exposing project occupants to elevated particulate concentrations from a wildfire. [Threshold W-2]**

See also Impact 5.15-1, in Section 5.15, *Public Services*.

### General Plan

The City of Corona and its SOI is vulnerable to and at significant risk of wildfires. Bordered by the Cleveland National Forest on the south, Chino Hills State Park on the northwest, and Gavilan Hills on the eastern front, Corona is surrounded by areas with fuel mixes that could easily ignite and encroach into the community. During a wildfire event, people within the air basin are exposed to elevated levels of particulates. The type and extent of vegetation and fuel, wind and climatic patterns, general topography and canyons, and other local characteristics make the City more vulnerable to wildfires.

Table 5.20-4, *Existing Assets in Very High Fire Severity Zones*, describes the number of assets in the VHFHSZ in the City and SOI. The City has approximately 9,300 housing units and 3 million square feet of office, commercial, and industrial buildings in the VHFHSZ. These include two freeways (I-15 and SR-91), electrical

transmission lines, and some public utilities. The primary assets (essential facilities) at risk are seven water reservoirs and two radio communication towers situated within the VHFHSZ. For these existing essential facilities that are situated in Corona's VHFHSZ, these facilities have been hardened by undergrounding utilities, maintaining brush clearance around such facilities, or employing other appropriate measures that protect such facilities from damage. In some rural areas, there remains small, isolated pockets of nonconforming residential development. Several areas near the foothills have limited access to them (e.g., single egress or unpaved roads). The developments, that were built years ago, may no longer be maintaining fuel breaks or adhering to safe building practices. To address these issues, the City has received a grant to establish a Fire Safe Council that will cover the City's VHFHSZ. Through the Fire Safe Council, the City is preparation of a Community Wildfire Planning Program (CWPP) that addresses these nonconforming issues, and would reduce the existing risk from nonconforming developments.

Table 5.20-4 Existing Assets in Very High Fire Severity Zones

| Location | Acreage | Assets at Risk in Very High Fire Hazard Zones |
|---|---|---|
| City | 5,586 | Housing: 5,081 units<br>Commercial, office, industrial: 49 parcels with 1.5 msf<br>Infrastructure: 39 parcels containing utilities |
| SOI | 10,683 | Housing: 4,229 units<br>Commercial, office, industrial: 88 parcels with 1.5 msf<br>Infrastructure: 69 parcels containing utilities |
| Total | 16,268 | Housing: 9,310 units<br>Commercial, office, industrial: 137 parcels with 3.0 msf<br>Infrastructure: 108 parcels containing utilities |

Development associated with buildout of the General Plan Update would result in new development within the urban-wildland interface and would place more assets in the VHFHSZ. To protect development in the VHFHSZ, the City requires adherence to a wide range of state and local codes (California Fire Code, CAL-FIRE fire safe design requirements, City Fire and Public Works Standards, and other standards). These include restrictions on hillside development. Because development in the urban-wildland interface presents challenges for fire protection and suppression, development in these areas are required to abide by the Corona Fire Department's Structure Protection Plan (SPPs). There are 12 SPPs in the Corona and SOI. Each SPP is tailored to the fire behavior associated the terrain, fuel, and fire infrastructure needed to address wildfire risk unique to these area. Adherence to the measures in the individual SPPs for these areas within the urban-wildland interface would minimize impacts to the extent possible and would ensure that new development would not exacerbate fire hazards. With adherence to these building practices and fuel modification requirements in the SPPs, development associated with the General Plan buildout would not exacerbate risk.

Additionally, the General Plan Update includes the policies to minimize risk from wildfire to reduce associated poor air quality generated during a wildfire event, such as:

- **LU-16.7** Work with Corona Fire, CAL FIRE and Forest Service and with property owners in affected areas to reduce and minimize the hazards associated with wildfire in the hillsides and open spaces, consistent with the goals and policies of the safety element.

- **CE-1.12** Provide all residential, commercial, and industrial areas with efficient and safe access for emergency vehicles, including undeveloped areas or those on the hillsides in high or very high fire hazard severity zones.

- **PS-8.3** Maintain mutual aid, automatic aid, and other multi-agency cooperative agreements to ensure that urban fire, wildfire, tactical response, hazmat, and other services are available at all times.

- **PS-9.3** Ensure that roadway, bridge and driveway standards are adequate and appropriately maintained to allow safe access to premises where emergencies take place and safe evacuations wherever needed.

- **PS-9.4** Maintain safe and accessible evacuation routes throughout the community; take precautions and ensure backup or mitigations for routes crossing high hazard areas (e.g., flood, seismic, high fire, etc.).

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not exacerbate wildfire risks. The CAP focuses on increasing energy efficient in existing and new residential and commercial units. Consequently, implementation of the City's CAP would result in less than significant impacts to wildfires.

**Impact 5.20-3: The proposed project would require the installation and maintenance of associated infrastructure in areas that are undeveloped or vacant which could exacerbate fire risk or may result in temporary or ongoing impacts to the environment. [Threshold W-3]**

### General Plan

Buildout of the General Plan Update would result in additional infrastructure, including roadways and transmission lines, in undeveloped areas of the City and SOI in order to serve new development. As, identified in Impact 5.20-3, some of this infrastructure would be placed with the VHFHSZ. To protect development in the VHFHSZ, the City requires adherence to a wide range of state and local codes (California Fire Code, CAL-FIRE fire safe design requirements, City Fire and Public Works Standards, and other standards). Additionally, adherence to the measures in the individual SPPs for new infrastructure in these areas within the urban-wildland interface would minimize impacts to the extent possible and would ensure that the new infrastructure would not exacerbate fire hazards. With adherence to these building practices and fuel modification requirements in the SPPs, infrastructure associated with the General Plan buildout would not exacerbate risk. Additionally, the General Plan Update includes Policies PS-8.1 through PS-8.9; Policies PS-9.1 PS-9.9; and Policies PS-10.1 through PS-10.9 to minimize risk from wildfire hazards.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help

reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not exacerbate wildfire risks. The CAP focuses on increasing energy efficient in existing and new residential and commercial units. Consequently, implementation of the City's CAP would result in less than significant impacts to wildfires.

**Impact 5.20-4: The proposed project would not 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. [Threshold W-4]**

## General Plan

Wildfires on hillsides can create hazards in the form of debris or mud flows. Debris/mud flows occur most frequently on hillsides that have little to no vegetation and are most common following wildfires. As identified above, to protect development in the VHFHSZ, the City requires adherence to a wide range of state and local codes (California Fire Code, CAL-FIRE fire safe design requirements, City Fire and Public Works Standards, and other standards). Additionally, adherence to the measures in the individual SPPs for new infrastructure in these areas within the urban-wildland interface would minimize impacts to the extent possible and would ensure that the development within the urban-wildland interface would not expose people or structures to significant risk associated with post-fire landslides, mudflows, and flooding. With adherence to these building practices and fuel modification requirements in the SPPs, impacts associated with the General Plan buildout would not exacerbate risk.

### *Flooding*

As indicated in Section 5.10, *Hydrology and Water Quality, a*reas of the City adjacent to the Santa Ana River, Temescal Creek and Mabey Canyon Wash are designated as Flood Zone A, which indicates the area is within a 100-year flood zone, or inundated by one percent annual chance flooding. Portions of the City surrounding Temescal Wash, Main Street Wash, and the Arlington Channel have been designated as Flood Zone X500, which is a 500-year flood zone. The Department of Water Resources (DWR) Awareness Floodplain zones include areas identified by the State with a potential for a 100-year flood but site-specific elevations and studies have not been completed for these areas. Properties within the Awareness Floodplain may warrant further study to assess the risk of flooding. Other portions of the City are either designated as Flood Zone D, which is an area with undetermined possible flood hazards, or Zone X, which lies outside the 100-year and 500-year flood zones. Figure 5.10-2, *Flood Hazards*, identifies the 100-year and the 500-year flood zones contained in the City as well as the Department of Water Resources (DWR) Awareness Floodplain areas. New development would be required to meet federal floodplain regulations, including that the lowest floor of the structure is raised above 100-year based flood elevation. Therefore, impacts to the exposure of structures or people to flooding as a result of post-fire slope instability would be less than significant.

### *Landslides and Debris Flow*

As indicated in Section 5.7, *Geology and Soils,* marginally stable slopes (including existing landslides) may be subject to landslides caused by earthquakes. The landslide hazard depends on many factors, including existing slope stability, shaking potential, and presence of existing landslides. The terrain of the City is varied, ranging

from relatively flat to hilly. Grading permits for hillside developments must have an engineering geology report prepared and submitted to the City. Therefore, impacts as a result of post-fire slope instability would be less than significant.

### Climate Action Plan

The update to the City's Climate Action Plan focuses on GHG reduction strategies to achieve the 2030 and 2040 reduction goals. The proposed Climate Action Plan would implement the General Plan and would help reduce GHG emissions generated by existing and proposed land uses in the City. The CAP would not exacerbate wildfire risks. The CAP focuses on increasing energy efficient in existing and new residential and commercial units. Consequently, implementation of the City's CAP would result in less than significant impacts to wildfires.

## 5.20.5 Existing Regulations

### Federal

- NFPA 1141, Fire Protection Infrastructure for Land Development in Wildlands
- NFPA 1142, Water Supplies for Suburban and Rural Fire Fighting
- NFPA 1143, Wildland Fire Management
- NFPA 1144, Reducing Structure Ignition Hazards from Wildland Fire
- NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations

### State

- California Government Code §§ 51175-51189 – High Fire Hazard Severity Zones
- California Fire Code Title 24, Chapter 9 - Fire-safety-related building standards
- California Building Code, Title 24, Chapter 49 - Requirements for Wildland-Urban Interface
- California Building Code, Title 24, Chapter 7A Materials and Construction Methods for Exterior Wildfire Exposure.
- Public Resources Code §§ 4290 and 4291 – Fire safety standards for new construction in VHFHSZs in SRAs

### Regional

- Riverside County Unit Fire Plan
- County of Riverside Multi-Jurisdictional Local Hazard Management Plan
- Riverside County Local Agency Formation Commission

### City of Corona

- Corona Standards of Coverage Study Strategic and Fire Plan
- Community Wildfire Planning Program
- Corona Fire Prevention Guidelines and Standards
- Corona Local Hazard Mitigation Plan (LHMP)
- Corona Emergency Operations Plan (EOP)
- Corona Municipal Code

## 5.20.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.20-1, 5.20-2, 5.20-3, and 5.20-4.

## 5.20.7 Mitigation Measures

No mitigation measures are required.

## 5.20.8 Level of Significance After Mitigation

There are no significant unavoidable adverse impacts relating to wildfire.

## 5.20.9 References

California Department of Forestry and Fire Protection (CAL FIRE). 2018. Incident Information Database.

California Governor's Office of Planning and Research (OPR). 2015, May. Fire Hazard Planning: General Plan Technical Advice Series. http://www.opr.ca.gov/docs/Final_6.26.15.pdf

Citygate Associates, LLC. (Citygate). 2019, September 19. Draft Fire Department Operational Performance Consulting Services – Executive Summary.

Corona, City of. 2018. Corona Fire Department 2018 Annual Report. https://www.coronaca.gov/home/showdocument?id=15601

# 6. Significant Unavoidable Adverse Impacts

At the end of Chapter 1, *Executive Summary*, is a table that summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. Mitigation measures would reduce the level of impact, but the following impacts would remain significant, unavoidable, and adverse after mitigation measures are applied:

## Air Quality

- **Impact 5.3-1.** The General Plan Update would be inconsistent with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP) because buildout under the plan would exceed the population and employment estimates assumed for the AQMP and would cumulatively contribute to the nonattainment designations of the South Coast Air Basin (SoCAB). Incorporation of Mitigation Measures AQ-2 into future development projects for the operation phase described in Impact 5.3-3, below, would contribute to reduced criteria air pollutant emissions associated with buildout of the General Plan Update. Additionally, goals and policies included in the General Plan Update would promote increased capacity for alternative transportation modes and implementation of transportation demand management strategies. However, due to the magnitude and scale of the land uses that would be developed, no mitigation measures are available that would reduce operation and construction impacts below SCAQMD thresholds. In addition, the population and employment assumptions of the AQMP would continue to be exceeded until the AQMP is revised and incorporates the projections of the General Plan Update. Therefore, in regard to the General Plan Update, Impact 5.3-1 would remain ***significant and unavoidable***.

- **Impact 5.3-2.** Buildout of the General Plan Update would occur over a period of approximately 20 to 21 years or longer. Construction activities associated with buildout of the General Plan Update could generate short-term emissions that exceed the SCAQMD'S significance thresholds during this time and cumulatively contribute to the nonattainment designations of the SoCAB. Implementation of Mitigation Measure AQ-1 would reduce criteria air pollutant emissions from construction-related activities to the extent feasible. However, construction time frames and equipment for site-specific development projects are not available at this time and there is a potential for multiple development projects to be constructed at any one time, resulting in significant construction-related emissions. Therefore, despite adherence to Mitigation Measure AQ-1, Impact 5.3-2 as it pertains to the General Plan Update would remain ***significant and unavoidable***.

- **Impact 5.3-3.** Buildout in accordance with the General Plan Update would generate long-term emissions that would exceed SCAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SoCAB. Mitigation Measure AQ-2, in addition to the goals and policies of the General Plan Update, would reduce air pollutant emissions to the extent feasible. The

measures and policies covering topics such as expansion of the pedestrian and bicycle networks, promotion of public and active transit, and support to increase building energy efficiency and energy conservation would also reduce criteria air pollutants within the City and SOI. However, due to the magnitude of emissions generated by residential and nonresidential land uses, no mitigation measures are available that would reduce impacts below SCAQMD's thresholds. Therefore, Impact 5.3-3 would remain ***significant and unavoidable.***

- **Impact 5.3-4.** Implementation of the General Plan Update would generate toxic air contaminants (TACs) that could contribute to elevated levels in the air basins. While individual projects would achieve the project-level risk threshold of 10 per million, they would nonetheless contribute to the higher levels of risk in the SoCAB. Therefore, the General Plan Update's cumulative contribution to health risk is ***significant and unavoidable***.

- **Impact 5.3-5.** Mitigation Measures AQ-1 and AQ-2 (applied for Impacts 5.3-2 and 5.3-3, respectively) would reduce the regional construction and operation emissions associated with buildout of the General Plan Update and therefore, also result in a reduction of localized construction- and operation-related criteria air pollutant emissions to the extent feasible. However, because existing sensitive receptors may be close to project-related construction activities and large emitters of onsite operation-related criteria air pollutant emissions, construction and operation emissions generated by individual development projects have the potential to exceed SCAQMD's localized significance threshold (LSTs). Impact 5.3-5, in regard to the General Plan Update, would remain ***significant and unavoidable***.

### Agriculture and Forestry Resources

- **Impact 5.2-1.** Development of the General Plan Update would convert Farmland to non-agricultural use. While mitigation measures were considered; they would not fully mitigate the direct loss of farmlands associated with the implementation of the General Plan Update because there would still be a net reduction in the total amount of land suitable for agricultural use. Consequently, the associated loss of agricultural production under Impact 5.2-1 would be ***significant and unavoidable***.

- **Impact 5.2-2**. Development of the General Plan Update would convert Williamson Act Land to non-agricultural use. Consequently, the associated loss of agricultural preserve lands under Impact 5.2-2 would be ***significant and unavoidable***.

### Cultural Resources

- **Impact 5.5-1.** Policies included in the General Plan as well as Mitigation Measures CUL-1 through CUL-4 would reduce potential impacts associated with historic resources. However, if a proposed project would result in the demolition or significant alteration of a historical resource, it cannot be mitigated to a less than significant level. As a result, impacts on historic resources as a result of future development in accordance with the proposed General Plan Update are ***significant and unavoidable***.

## Greenhouse Gas Emissions

- **Impact 5.8-1.** Implementation of Mitigation Measure GHG-1 would establish a pathway towards meeting the long-term year 2050 greenhouse gas (GHG) reduction goal set by Executive Order S-03-05. However, at this time, there is no plan past 2030 that achieves the long-term GHG reduction goal established under Executive Order S-03-05. As identified by the California Council on Science and Technology, the state cannot meet the 2050 goal without major advancements in technology. Advancement in technology in the future could provide additional reductions to allow the state and City to meet the 2050 goal, however no additional statewide measures are currently available. Therefore, Impact 5.8-1 would be ***significant and unavoidable***.

## Land Use and Planning

- **Impact 5.11-2.** The proposed project land uses within the airport influence area of the Corona Municipal Airport would be generally consistent with the Riverside County Airport Land Use Compatibility Plan (ALUCP). However, the Airport Land Use Commission (ALUC) is required to make a determination of consistency of a project with the ALUCP and Caltrans health and safety standards, which would occur prior to the adoption. While land uses within the airport influence area identified in the land use Plan are generally consistent with ALUCP, the proposed project has not yet been before ALUC for a determination of consistency. If ALUC determines that the proposed project is not consistent with the ALUCP for the Corona Municipal Airport, and the Corona City Council overrides this finding by a two-thirds vote, a significant unavoidable adverse impact would result, and a Statement of Overriding Considerations would be required. Therefore, this impact is conservatively considered ***significant and unavoidable***.

## Mineral Resources

- **Impact 5.12-1.** The proposed project would result in a loss of mineral resource availability due to development of the General Plan Update. While mitigation measures were considered, they would not fully mitigate the loss of mineral resources because this loss would be irreversible. Consequently, the associated loss of mineral resources under Impact 5.12-1 would be ***significant and unavoidable***.

## Noise

- **Impact 5.13-1.** Mitigation Measure N-1 would reduce potential noise impacts during construction to the extent feasible. However, due to the potential for proximity of construction activities to sensitive uses, the number of construction projects occurring simultaneously, and the potential longevity of construction activities, Impact 5.13-1, could result in a temporary substantial increase in noise levels above ambient conditions. Therefore, impacts would remain ***significant and unavoidable***.

## Transportation

- **Impact 5.17-2.** The traffic analysis identified improvements to the Interstate 15 (I-15) ramps that would improve traffic conditions to achieve the Riverside County Transportation Commission's (RCTC)

# 6. Significant Unavoidable Adverse Impacts

Congestion Management Plan (CMP) standard of level of service (LOS) "F" to ensure consistency with the RCTC CMP. However, intersection #22 (El Cerrito Road at the I-15 southbound ramps) and #23 (El Cerrito Road at the I-15 northbound ramps) are within Caltrans jurisdiction and the City cannot guarantee that this improvement will be implemented. Therefore, Impact 5.17-2 impacts associated with consistency with the RCTC's CMP are considered ***significant and unavoidable***.

- **Impact 5.17-3.** Implementation of the General Plan Update would result in an increase in vehicle miles traveled (VMT) from existing conditions and compared to the Current General Plan. Future development projects consistent with the General Plan would need to consider transportation demand management (TDM) consistent with those identified in the Circulation Element. Mitigation Measure 17-1 would require the City to consider a VMT offset program, such as a VMT exchange or VMT mitigation bank to offset any increase project-level VMT generate by a project. Because the effectiveness of TDM measures included in the General Plan and the feasibility of a VMT offset program in Mitigation Measure 17-1 has not been determined, project and cumulative impacts under Impact 5.17-3 are considered ***significant and unavoidable***.

# 7. Alternatives to the Proposed Project

## 7.1 INTRODUCTION

### 7.1.1 Purpose and Scope

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines § 15126.6[a]). As required by CEQA, this chapter identifies and evaluates potential alternatives to the proposed project.

Section 15126.6 of the CEQA Guidelines explains the foundation and legal requirements for the alternatives analysis in an EIR. Key provisions are:

- "[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (15126.6[b])

- "The specific alternative of 'no project' shall also be evaluated along with its impact." (15126.6[e][1])

- "The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." (15126.6[e][2])

- "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project." (15126.6[f])

- "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (15126.6[f][1]).

- "Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." (15126.6[f][2][A])

- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." (15126.6[f][3])

For each development alternative, this analysis:

- Describes the alterative.
- Analyzes the impact of the alternative as compared to the proposed project.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Assesses whether the alternative would meet most of the basic project objectives.
- Evaluates the comparative merits of the alternative and the project.

According to Section 15126.6(d) of the CEQA Guidelines, "[i]f an alternative would cause…significant effects in addition those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed."

## 7.1.2 Project Objectives

As described in Section 3.3, the following objectives have been established for the proposed project and will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts.

1. Provide well-designed and accessible residential neighborhoods and commercial and industrial districts to provide opportunities for people to live, work, and play.

2. Retain and enhance Corona's small-town character and its neighborhoods to provide a diversity of housing, neighborhoods, and amenities.

3. Restore downtown Corona as the symbolic, functional, and historic core of the city.

4. Ensure that people, goods, and services move safely and efficiently through the city and connect to the larger region.

5. Improve employment opportunities for Corona's residents by encouraging existing businesses to invest and expand in Corona; recruit clean, high-technology businesses and research-and-development companies; provide jobs that match the skill of Corona's residents; and support the city's economic base through adequate land and infrastructure.

6. Ensure that Corona is a safe community for residents, business, and visitors.

7. Respect and enhance Corona's environmental resources by creating connections between the built and natural environment to increase awareness of and opportunities for enjoyment by Corona's residents and integrate conservation practices to lessen the burden on the environment.

8. Engage Corona's active citizenry to achieve an efficient and responsive government that works with its citizens and regional agencies to meet collective needs and provide timely and understandable information.

9. Foster a vibrant community that supports healthy lifestyles, historical resources, arts, education, and culture for all residents.

## 7.1.3 Significant Impacts of the Project

The following significant and unavoidable impacts are identified in Chapter 5, *Environmental Analysis*, of this Draft EIR (DEIR):

### Air Quality

- **Impact 5.3-1.** The General Plan Update would be inconsistent with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP) because buildout under the plan would exceed the population and employment estimates assumed for the AQMP and would cumulatively contribute to the nonattainment designations of the South Coast Air Basin (SoCAB). Incorporation of Mitigation Measures AQ-2 into future development projects for the operation phase described in Impact 5.3-3, below, would contribute to reduced criteria air pollutant emissions associated with buildout of the General Plan Update. Additionally, goals and policies included in the General Plan Update would promote increased capacity for alternative transportation modes and implementation of transportation demand management strategies. However, due to the magnitude and scale of the land uses that would be developed, no mitigation measures are available that would reduce operation and construction impacts below SCAQMD thresholds. In addition, the population and employment assumptions of the AQMP would continue to be exceeded until the AQMP is revised and incorporates the projections of the General Plan Update. Therefore, in regard to the General Plan Update, Impact 5.3-1 would remain ***significant and unavoidable***.

- **Impact 5.3-2.** Buildout of the General Plan Update would occur over a period of approximately 20 to 21 years or longer. Construction activities associated with buildout of the General Plan Update could generate short-term emissions that exceed the SCAQMD'S significance thresholds during this time and cumulatively contribute to the nonattainment designations of the SoCAB. Implementation of Mitigation Measure AQ-1 would reduce criteria air pollutant emissions from construction-related activities to the extent feasible. However, construction time frames and equipment for site-specific development projects are not available at this time and there is a potential for multiple development projects to be constructed at any one time, resulting in significant construction-related emissions. Therefore, despite adherence to Mitigation Measure AQ-1, Impact 5.3-2 as it pertains to the General Plan Update would remain ***significant and unavoidable***.

- **Impact 5.3-3.** Buildout in accordance with the General Plan Update would generate long-term emissions that would exceed SCAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SoCAB. Mitigation Measure AQ-2, in addition to the goals and policies of the General Plan Update, would reduce air pollutant emissions to the extent feasible. The measures and policies covering topics such as expansion of the pedestrian and bicycle networks, promotion of public and active transit, and support to increase building energy efficiency and energy conservation would also reduce criteria air pollutants within the City and SOI. However, due to the magnitude of emissions generated by residential and nonresidential land uses, no mitigation measures are available that would

reduce impacts below SCAQMD's thresholds. Therefore, Impact 5.3-3 would remain ***significant and unavoidable***

- **Impact 5.3-4.** Implementation of the General Plan Update would generate toxic air contaminants (TACs) that could contribute to elevated levels in the air basins. While individual projects would achieve the project-level risk threshold of 10 per million, they would nonetheless contribute to the higher levels of risk in the SoCAB. Therefore, the General Plan Update's cumulative contribution to health risk is ***significant and unavoidable***..

- **Impact 5.3-5.** Mitigation Measures AQ-1 and AQ-2 (applied for Impacts 5.3-2 and 5.3-3, respectively) would reduce the regional construction and operation emissions associated with buildout of the General Plan Update and therefore, also result in a reduction of localized construction- and operation-related criteria air pollutant emissions to the extent feasible. However, because existing sensitive receptors may be close to project-related construction activities and large emitters of onsite operation-related criteria air pollutant emissions, construction and operation emissions generated by individual development projects have the potential to exceed SCAQMD's localized significance threshold (LSTs). Impact 5.3-5, in regard to the General Plan Update, would remain ***significant and unavoidable***.

### Agriculture and Forestry Resources

- **Impact 5.2-1.** Development of the General Plan Update would convert Farmland to non-agricultural use. While mitigation measures were considered; they would not fully mitigate the direct loss of farmlands associated with the implementation of the General Plan Update because there would still be a net reduction in the total amount of land suitable for agricultural use. Consequently, the associated loss of agricultural production under Impact 5.2-1 would be ***significant and unavoidable***.

- **Impact 5.2-2**. Development of the General Plan Update would convert Williamson Act Land to non-agricultural use. Consequently, the associated loss of agricultural preserve lands under Impact 5.2-2 would be ***significant and unavoidable***.

### Cultural Resources

- **Impact 5.5-1.** Policies included in the General Plan as well as Mitigation Measures CUL-1 through CUL-4 would reduce potential impacts associated with historic resources. However, if a proposed project would result in the demolition or significant alteration of a historical resource, it cannot be mitigated to a less than significant level. As a result, impacts on historic resources as a result of future development in accordance with the proposed General Plan Update are ***significant and unavoidable***.

### Greenhouse Gas Emissions

- **Impact 5.8-1.** Implementation of Mitigation Measure GHG-1 would establish a pathway towards meeting the long-term year 2050 greenhouse gas (GHG) reduction goal set by Executive Order S-03-05. However, at this time, there is no plan past 2030 that achieves the long-term GHG reduction goal established under

Executive Order S-03-05. As identified by the California Council on Science and Technology, the state cannot meet the 2050 goal without major advancements in technology. Advancement in technology in the future could provide additional reductions to allow the state and City to meet the 2050 goal, however no additional statewide measures are currently available. Therefore, Impact 5.8-1 would be ***significant and unavoidable***.

### Land Use and Planning

- **Impact 5.11-2.** The proposed project land uses within the airport influence area of the Corona Municipal Airport would be generally consistent with the Riverside County Airport Land Use Compatibility Plan (ALUCP). However, the Airport Land Use Commission (ALUC) is required to make a determination of consistency of a project with the ALUCP and Caltrans health and safety standards, which would occur prior to the adoption. While land uses within the airport influence area identified in the land use Plan are generally consistent with ALUCP, the proposed project has not yet been before ALUC for a determination of consistency. If ALUC determines that the proposed project is not consistent with the ALUCP for the Corona Municipal Airport, and the Corona City Council overrides this finding by a two-thirds vote, a significant unavoidable adverse impact would result, and a Statement of Overriding Considerations would be required. Therefore, this impact is conservatively considered ***significant and unavoidable***.

### Mineral Resources

- **Impact 5.12-1.** The proposed project would result in a loss of mineral resource availability due to development of the General Plan Update. While mitigation measures were considered, they would not fully mitigate the loss of mineral resources because this loss would be irreversible. Consequently, the associated loss of mineral resources under Impact 5.12-1 would be ***significant and unavoidable***.

### Noise

- **Impact 5.13-1.** Mitigation Measure N-1 would reduce potential noise impacts during construction to the extent feasible. However, due to the potential for proximity of construction activities to sensitive uses, the number of construction projects occurring simultaneously, and the potential longevity of construction activities, Impact 5.13-1, could result in a temporary substantial increase in noise levels above ambient conditions. Therefore, impacts would remain ***significant and unavoidable***.

### Transportation

- **Impact 5.17-2.** The traffic analysis identified improvements to the Interstate 15 (I-15) ramps that would improve traffic conditions to achieve the Riverside County Transportation Commission's (RCTC) Congestion Management Plan (CMP) standard of level of service (LOS) "F" to ensure consistency with the RCTC CMP. However, intersection #22 (El Cerrito Road at the I-15 southbound ramps) and #23 (El Cerrito Road at the I-15 northbound ramps) are within Caltrans jurisdiction and the City cannot guarantee that this improvement will be implemented. Therefore, Impact 5.17-2 impacts associated with consistency with the RCTC's CMP are considered ***significant and unavoidable***.

- **Impact 5.17-3.** Implementation of the General Plan Update would result in an increase in vehicle miles traveled (VMT) from existing conditions and compared to the Current General Plan. Future development projects consistent with the General Plan would need to consider transportation demand management (TDM) consistent with those identified in the Circulation Element. Mitigation Measure 17-1 would require the City to consider a VMT offset program, such as a VMT exchange or VMT mitigation bank to offset any increase project-level VMT generate by a project. Because the effectiveness of TDM measures included in the General Plan and the feasibility of a VMT offset program in Mitigation Measure 17-1 has not been determined, project and cumulative impacts under Impact 5.17-3 are ***considered significant and unavoidable***.

## 7.2 ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING/PROJECT PLANNING PROCESS

Alternatives to the proposed project were evaluated based on their ability to reduce potentially significant impacts of the proposed project and their potential to attain most of the project's basic objectives. The following is a discussion on the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this DEIR.

### 7.2.1 Alternative Development Areas

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (CEQA Guidelines § 15126[5][B][1]). The proposed project is the General Plan Update for the City of Corona. The City does not have authority to carry out functions pursuant to its General Plan, including regulating land uses outside of the City's boundaries. Therefore, an alternative development area would be infeasible and was not analyzed.

### 7.2.2 Reduced Land Use Intensity in the SOI

A Reduced Land Use Intensity in the SOI was considered in order to reduce VMT compared to existing conditions and the General Plan Update. Reducing land use intensity in the SOI would reduce VMT because new development is forecasted to occur primarily on the edges of the City rather than intensifying land uses in the City center. In general, California Public Resources Code Section 21159.26 discourages reduced residential land use density as an alternative if there is another feasible project alternative that would provide a comparable level of mitigation. However, much of the new growth proposed under the existing General Plan and proposed General Plan Update would occur in the SOI. Therefore, residents living in these areas would have to commute farther than existing residences to places of employment in the City and SCAG region. The Reduced Land Use Intensity Alternative would reduce the amount of housing allowed in the SOI, in order to reduce sprawl in the outlying areas, which would thereby, reduce VMT. However, the land use forecasts for the SOI are based on adopted specific plans in the County, meaning that land uses are entitled but have not yet been built. Therefore,

because of the growth in the SOI that is already entitled, the Reduced Land Use Intensity Alternative is considered and rejected.

### 7.2.3 Agricultural Preserve Alternative

An alternative that would redesignate areas currently identified as Farmland and/or Williamson Act contract was considered and rejected as infeasible because this alternative would not be consistent with the City's goals for housing and jobs and because it would place farmland near incompatible land uses. This would create islands of agricultural uses within an urbanized setting, potentially resulting in incompatible land uses. The City's policy towards the long-term maintenance of agriculture can also be seen from the land use designations proposed, none of which would solely allow agriculture permanently. Additionally, the economic viability of agricultural use in Riverside County has declined as a result of losing many of the support services associated with the agricultural industry. Ultimately, the long-term viability of agriculture within the City is limited due to the increasing land prices and values, higher water costs, higher labor costs, higher property taxes, competition from other parts of the state, and the growing urbanization of the area. These factors make the long-term, permanent use of lands within the City for agricultural purposes economically infeasible.

## 7.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Based on the criteria listed above, the following three alternatives have been determined to represent a reasonable range of alternatives which have the potential to feasibly attain most of the basic objectives of the project but which may avoid or substantially lessen any of the significant effects of the project. These alternatives are analyzed in detail in the following sections.

- No Project/Existing General Plan Alternative
- Transit Oriented Development Alternative

An EIR must identify an "environmentally superior" alternative and where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the proposed project and determined to be environmentally superior, neutral, or inferior. However, only those impacts found significant and unavoidable are used in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. Only the impacts involving cultural resources (historic), air quality, agricultural resources, GHG, land use and planning (ALUC consistency), noise, and transportation were found to be significant and unavoidable. Section 7.7 identifies the Environmentally Superior Alternative. The preferred land use alternative (proposed project) is analyzed in detail in Chapter 5 of this DEIR.

### 7.3.1 Alternatives Comparison

The following statistical analysis provides a summary of general socioeconomic build-out projections determined by the three land use alternatives, including the proposed project. It is important to note that these are not growth projections. That is, they do not anticipate what is likely to occur by a certain time horizon, but

rather provide a build-out scenario that would only occur if all the areas of the City were to develop to the probable capacities yielded by the land use alternatives. The following statistics were developed as a tool to understand better the difference between the alternatives analyzed in the DEIR. Table 7-1, *City + SOI Buildout Statistical Summary,* identifies City-wide information regarding dwelling unit, population and employment projections, and also provides the jobs to housing ratio for each of the alternatives.

Table 7-1 City + SOI Buildout Statistical Summary

| | Existing Conditions | Proposed Project | No Project/Existing General Plan Alternative | Transit Oriented Development Alternative |
|---|---|---|---|---|
| Dwelling Units | 59,428 | 70,939 | 70,939 | 73,052 |
| Population | 202,630 | 241,928 | 241,928 | 249,128 |
| Employment | 75,318 | 106,474 | 106,474 | 105,942 |
| Jobs-to-Housing Ratio | 1.26 | 1.50 | 1.50 | 1.45 |

## 7.4 NO PROJECT / EXISTING GENERAL PLAN ALTERNATIVE

In the No Project/Existing General Plan Alternative, the General Plan Update would not be implemented by the City. The current General Plan would remain in effect. Buildout statistics for the proposed General Plan Update and the current General Plan are compared in Table 7-1. Land use designations, intensities, and densities of the proposed project would remain unchanged, in comparison to the existing General Plan; the General Plan Update would update the Land Use Plan with General Plan Amendments that have been approved since 2004.

The primary difference between the proposed General Plan and the No Project/Existing General Plan Alternative (i.e., the current General Plan) are the proposed policies. Under the No Project/Existing General Plan Alternative, these changes would not occur:

- Circulation Element Policies to address the Complete Streets Act
- Changes to the Roadway Plan
  - 6th Street 'Road Diet'
  - Roadway classification changes
- Public Safety Element Policies (including climate change adaptation and vulnerability assessment, wildfire, and airport land use compatibility)
- Healthy Communities Element Policies (including environmental justice)
- Parks, Recreation, Cultural Arts, & Education Element Policies (addresses new trails)
- Infrastructure Element Policies (reclaimed water goals)
- Community Design Element Policies (designates the New Foothill Corridor as a Local Scenic Corridor)

As identified in Table 5.17-9, *Cumulative VMT/SP Analysis*, in Section 5.17, *Transportation*, the proposed project also includes changes to the circulation network to provide a 'road diet' on 6th Street, which reduces the number of lanes on 6th Street from four to two in the proposed project. Under the proposed project vehicles are selecting a slightly longer path of travel given the lane reduction in capacity on 6th Street. As a result, this alternative results in a slight (<1 percent) decrease in total VMT but the same VMT per service population (SP) as the proposed project, as shown in Table 7-2, *No Project / Existing General Plan Development Alternative VMT/SP Analysis*.

Table 7-2 No Project / Existing General Plan Alternative VMT/SP Analysis

| | Existing | | Project | | Alternative | | Change from Project | |
|---|---|---|---|---|---|---|---|---|
| Scenario | Total VMT | Existing VMT/SP | Total VMT | Project VMT/SP | Total VMT | Alternative VMT/SP | Total VMT | VMT/SP |
| City of Corona | 7,093,655 | 30.0 | 8,674,797 | 32.3 | 8,672,884 | 32.3 | -1,913 | 0.0 |
| SOI | 1,295,079 | 31.1 | 2,702,890 | 33.8 | 2,701,420 | 33.8 | -1,470 | 0.0 |
| Total City + SOI | 8,385,277 | 30.2 | 11,366,074 | 32.6 | 11,362,777 | 32.6 | -3,297 | 0.0 |

Source: Fehr and Peers 2019

## 7.4.1 Aesthetics

In this alternative, the entire City would be developed under the current land use plan and would involve new development and redevelopment in the same areas as the proposed General Plan Update. The City's Municipal Code identifies development standards to ensure quality development in the City. Under this alternative, the policy to add Foothill Corridor as a Local Scenic Corridor would not be implemented. The aesthetic impacts would be similar to the proposed project and would be less than significant.

## 7.4.2 Agriculture and Forestry Resources

In this alternative, the entire City would be developed under the existing land use plan and would involve new development and redevelopment in similar areas as the proposed General Plan Update. As a result, this alternative would have similar impacts to Farmland (City and SOI) and lands currently under a Williamson Act contract (SOI only). Therefore, impacts on agriculture and forestry resources would be similar to the proposed project and would remain significant.

## 7.4.3 Air Quality

Because the development intensity of the proposed project and this alternative are the same, this alternative would result in similar levels of criteria air pollutant emissions and toxic air contaminants (TACs) as the proposed project, even with the slight increase in VMT. Therefore, like the proposed project, implementation of this alternative would also result in significant and unavoidable impacts regarding consistency with the AQMP, cumulatively considerable net increase of pollutants for which the project region is in non-attainment, exposing sensitive receptors to substantial pollutant concentrations, and resulting in other emissions that could adversely affect a substantial number of people. However, unlike the proposed project, this alternative would

not result in an update to the City's Climate Action Plan (CAP), which has air quality related co-benefits. In comparison to the proposed project, this alternative would have similar impacts and impacts would remain significant.

### 7.4.4 Biological Resources

Under this alternative, biological resource impacts would be the same as the proposed project. A number of special status plant species and special status wildlife species are known to occur within or immediately adjacent to the City and SOI or are known to occur in the region based on historical data. In addition, sensitive riparian communities and jurisdictional wetlands are also found within the Corona area. Federal and state regulations require development projects to assess and mitigate potential biological resources within a project site. The existing General Plan would increase development by 5,068 dwelling units, but would be within the same footprint as the General Plan Update. The proposed General Plan Update does not propose changes to land use density, designations, or intensities beyond that which is currently within the existing General Plan. Mitigation measures identified for the project would be applicable to this alternative. Therefore, impacts on biological resources would be the same as the proposed General Plan Update, and impacts would be less than significant with mitigation incorporated.

### 7.4.5 Cultural Resources

Cultural resource impacts are primarily associated with potential ground disturbance and development of previously undisturbed areas, or impacts to potential historic structures (building additions, demolition, etc.). Development under this alternative would be the same as the proposed project because land use designations, densities, and intensities would remain unchanged in both scenarios. Mitigation measures for the proposed project would be applicable to this alternative and would mitigate potential impacts to archeological resources. However, like the proposed project, this alternative would have the potential to impact historic buildings as a result of redevelopment. Therefore, impacts to potential cultural resources would be the same as the proposed project and would remain significant and unavoidable.

### 7.4.6 Energy

Development intensity of the proposed project and this alternative are the same; and therefore, this alternative would result in similar energy use. However, the proposed project would update the City's CAP, which has the potential to reduce energy use in the City. In general, impacts to energy use under this alternative would be slightly reduced to the proposed project, and would be less than significant.

### 7.4.7 Geology and Soils

As with the General Plan Update, individual development projects under the No Project/Existing General Plan Alternative would be required to prepare site-specific geotechnical investigations to evaluate seismic, liquefaction, ground settlement, paleontological resources, and/or soil expansion hazards. All development projects would be required to comply with existing federal, state, and local regulations, such as the California Building Code and statewide General Construction Permit. The proposed General Plan Update does not

propose changes to land use density, designations, or intensities beyond that which is currently within the existing General Plan. Impacts be the same as proposed project, and would be less than significant.

### 7.4.8 Greenhouse Gas Emissions

Because the development intensity of the proposed project and this alternative are the same, this alternative would result in similar levels of GHG as the proposed project, even with the slight increase in VMT. However, this alternative would not include the proposed project's update to the City's CAP includes goals, specifically Goal 7, which directs the City to decrease GHG emissions by reducing VMT. The CAP Update outlines a plan to achieve the 2030 GHG reduction targets under Senate Bill 32 and a trajectory to achieve an interim target for the General Plan horizon year. However, at this time, there is no plan past 2030 that achieves the long-term GHG reduction goal established under Executive Order S-03-05; therefore, GHG impacts of the project were conservatively called significant. Impacts of this alternative would slightly increase compared to the proposed project, and would remain significant and unavoidable.

### 7.4.9 Hazards and Hazardous Materials

In both this alternative and the proposed General Plan Update, land uses throughout the City would be required to comply with existing federal, state, and local regulations governing use, storage, transport, and disposal of hazardous materials and hazardous wastes. Structures built in fire hazard severity zones would be required to comply with building standards in the California Building Code and the California Fire Code. However, under this alternative, the new policies pertaining to wildfires would not be implemented. This alternative would result in similar impacts compared to the proposed project, and impacts would be less than significant.

### 7.4.10 Hydrology and Water Quality

This alternative would have the same hydrology and water quality impacts as the proposed project. Future project specific water quality management plans (WQMPs), preliminary and/or final, will be prepared consistent with the prevailing terms and conditions of the City Local Implementation Plan (LIP), and Model WQMP at the time of project application. Moreover, Low Impact Development (LID) and water quality treatment solutions prescribed in project specific WQMPs shall be designed to support or enhance the regional BMPs and efforts implemented by the City as part of their City and SOI-wide efforts to improve water quality. During construction, project specific Stormwater Pollution Prevention Plans (SWPPP) are required to be prepared in accordance with the site-specific sediment risk analyses based on the grading plans. The SWPPP must describe construction Best Management Practices BMPs that address pollutant source reduction, and provide measures/controls necessary to mitigate potential pollutant sources. Therefore, impacts would be similar and remain less than significant.

### 7.4.11 Land Use and Planning

This alternative would leave the current General Plan in place rather than providing a technical update and CAP update. While land uses within the airport influence area identified in the land use plan are generally consistent with air Riverside County Airport Land Use Compatibility Plan (ALUCP) for the Corona Municipal Airport,

the proposed project has not yet been before ALUC for a determination of consistency; and therefore, impacts associated with this alternative, like the proposed project, would be significant. Neither this alternative nor the proposed project would divide an established community. However, the current General Plan is not consistent with new or updated state and local planning laws such as the California Complete Streets Act of 2008 and the Southern California Association of Government's 2016-2040 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS). The Complete Streets Act of 2008 requires that cities plan for a multimodal transportation network that serves motorized and nonmotorized modes of transportation, and the 2016-2040 RTP/SCS encourages three principles that collectively work as the key to the region's future – mobility, economy and sustainability. Goals and policies in the proposed General Plan Update Circulation Element address the need to establish an interconnected network of bicycle and pedestrian infrastructure that is safe, efficient, and accessible. Comprehensive transit services related to mobility, connectivity, and safety are also addressed. However, since the existing General Plan was prepared in 2004, the new state planning laws would not be reflected. This alternative would not implement policies regarding ALUC, complete streets, and reusing industrial land uses. Therefore, the land use impacts would be slightly increased under this alternative in comparison to the proposed General Plan Update; like the proposed project, would be significant (ALUCP consistency).

### 7.4.12 Mineral Resources

The proposed project and this alternative would result in similar impacts to mineral resources. Most active mines would continue to operate, and areas designated as having significant aggregate and mineral resources are zoned General Industrial, Light Industrial, or Mineral Resources and would not preclude mining operations in these MRZ-2 areas. However, mineral resource areas in MRZ-2 could be developed which would preclude future extraction of minerals in these areas. Overall, the impact to mineral resources would be similar to the proposed project, and remain significant and unavoidable.

### 7.4.13 Noise

Construction and operational noise impacts would be the same as the proposed project under this alternative. Like the proposed project, construction activities under this alternative could occur close to sensitive receptors and impacts would be significant. This alternative would generate the same number of trips and development patterns as the proposed project. Therefore, noise impacts would be the same under this alternative in comparison to the proposed project; and would be significant (construction noise).

### 7.4.14 Population and Housing

This alternative would result in the same number of dwelling units and employment as the proposed project. Therefore, population and housing impacts of this alternative would be the same as proposed project, and remain less than significant.

### 7.4.15 Public Services

This alternative would result in the same population and employment as the proposed project. Impacts on public services, including fire, police, school, and library services, would be the same under this alternative. Therefore, impacts would be the same as the proposed project and be less than significant.

### 7.4.16 Recreation

This alternative would result in the same population as the proposed project; and the same demand on recreation and recreational services in the city. However, under this alternative, policies pertaining to trails would not be implemented. Impacts under this alternative, impacts would be similar to the proposed project, and would be less than significant.

### 7.4.17 Transportation

As identified in Table 5.17-9, *Cumulative VMT/SP Analysis*, in Section 5.17, *Transportation*, this alternative results in a slight decrease in total VMT by the same VMT per service population (SP) as the proposed project. This alternative would eliminate the cumulative transportation impact since this alternative since the City adopted a threshold of a no net increase in VMT compared to the current General Plan as the cumulative impact criteria. However, as shown in Table 7-2, this alternative would still result in an increase in VMT/SP compared to existing conditions. Additionally, this alternative would continue to contribute to congestion on the Interstate 15 (I-15) ramps. As a result, project-level impacts would remain. However, this alternative would not implement the policies pertaining to complete streets. Overall, this alternative would eliminate the project's cumulative transportation impact and therefore, impacts would be decreased under this scenario compared to the proposed project; however, project-level significant and unavoidable impacts would continue to occur.

### 7.4.18 Tribal Cultural Resources

Impacts to tribal cultural resources would primarily be associated with potential ground disturbance and development of previously undisturbed areas. Development under the proposed project and this alternative would be similar, as land use designations, densities, and intensities would remain unchanged in both scenarios. Mitigation measures for the protection of tribal cultural resources would be applicable to this alternative. Additionally, both the proposed project and this alternative would comply with federal and state regulations pertaining to the protection and preservation tribal cultural resources. Therefore, impacts to potential tribal cultural resources would be similar and less than significant.

### 7.4.19 Utilities and Service Systems

This alternative would result in the same population and employment as the proposed project; and therefore, the impact on the City's infrastructure systems would be similar. Overall, impacts would be the same under this alternative, and impacts would be less than significant.

### 7.4.20 Wildfire

Because the development intensity of the proposed project and this alternative are the same, this alternative would result in similar risk associated with wildfire events. However, under this alternative, the proposed General Plan Update policies regarding wildfires would not be implemented. Overall, this alternative would have similar impacts compared to the proposed project, and impacts would be less than significant.

### 7.4.21 Conclusion

#### Ability to Reduce Environmental Impacts

Impacts of the No Project/Existing General Plan alternative would be similar for aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, noise public services, recreation, tribal cultural resources, and utilities and service systems. Impacts would be greater for energy and GHG emissions. This alternative would eliminate the proposed project's cumulative VMT impact on transportation and lessen project-level VMT impacts caused by a slight increase in VMT associated with the updated Roadway Plan.

#### Ability to Achieve Project Objectives

The No Project/Existing General Plan Alternative would meet all of the project objectives; however, this alternative would not implement the proposed General Plan Update policies, which are designed to further enhance the project objectives, compared to the existing General Plan.

## 7.5 TRANSIT ORIENTED DEVELOPMENT ALTERNATIVE

The Transit Oriented Development Alternative would increase land use intensity within a quarter mile of existing transit stops near downtown Corona, including the North Main Metrolink and areas served by the Corona Cruiser up to 60 dwelling units per acre. The Metrolink runs east-west through Home Gardens and Corona. The Corona Cruiser operates a blue line and red line route throughout the City.

The North Main Metrolink Station is at 250 East Blaine Street. As shown in Table, 7-3, *Land Use Designations with a Quarter Mile of the North Main Metrolink Station*, while 24 percent of this area allows mixed-use development, the remainder of this area is designated primary for General Commercial use, Light Industrial, and General Industrial use. This alternative would redesignate the entire area within a quarter mile of the North Main Metrolink Station to allow residential up to 60 dwelling units per acre.

Table 7-3 Land Use Designations within a Quarter Mile of the North Main Metrolink Station

| General Plan Land Use Designation | Acres |
|---|---|
| General Commercial | 13.3 |
| Mixed-Use (Residential / Commercial) | 8.7 |
| Light Industrial | 7.6 |
| General Industrial | 4.8 |
| Low Density Residential | 1.2 |
| Total | 35.6 |

The land use statistics for the Transit Oriented Development Alternative are compared in Table 7-1. As identified in this table, this alternative would result in 2,113 additional residential units and 7,200 people within the City. Additionally, the redesignation would result in a loss of approximately 260,220 square feet non-residential uses and 285 less employees compared to the proposed project. As a result, this alternative results in a slight (2 percent) increase in total VMT but a slight (<1 percent) decrease in total VMT/SP—a measure of a project's land use efficiency—compared the proposed project, as shown in Table 7-4, *Transit Oriented Development Alternative VMT/SP Analysis*.

Table 7-4 Transit-Oriented Development Alternative VMT/SP Analysis

| | Existing | | Project | | Alternative[1] | | Change from Project | |
|---|---|---|---|---|---|---|---|---|
| Scenario | Total VMT | Existing VMT/SP | Total VMT | Project VMT/SP | Total VMT | Alternative VMT/SP | Total VMT | VMT/SP |
| Total City + SOI | 8,385,277 | 30.2 | 11,366,074 | 32.6 | 11,554,897 | 32.5 | 188,823 | -0.1 |

Source: Fehr and Peers 2019

[1] Assumes a 10 percent reduction in VMT per person for the additional 2,113 additional residents based on the California Air Pollution Control Officer's Association (CAPCOA) Quantifying GHG Mitigation Measures (2010).

## 7.5.1 Aesthetics

In this alternative, there would be new intensified development and redevelopment in areas near existing transit. Although future development under this alternative would be required to comply with the development standards of the City's Municipal Code to ensure quality development in the City, certain development standards may differ for future projects near transit (e.g., FAR, building height) in order to allow for the intensification of development in these areas. Therefore, impacts are similar but would remain less than significant.

## 7.5.2 Agriculture and Forestry Resources

In this alternative, areas that are designated as Farmland would continue to be developed. As a result, this alternative would have similar impacts to Farmland (City and SOI) and lands currently under a Williamson Act

contract (SOI only). Therefore, impacts on agriculture and forestry resources would be similar to the proposed project and would remain significant.

### 7.5.3 Air Quality

Air quality impacts are measured by total mass emissions. There are currently no efficiency based thresholds to measure a project's air quality benefits. This alternative would result in an approximately 2 percent increase in mobile-source emissions as well as an increase in energy use as a result of the increase in land use intensity in the land within a quarter mile of the North Main Metrolink Station. While transit-oriented developed is a more efficient land use from a transportation perspective, it has the potential to result in an increase in the magnitude of air pollutants. Additionally, this alternative would result in slightly higher levels of construction and associated short-term criteria air pollutant emissions compared to the proposed project due to the increased intensity. Implementation of the proposed project was found to have significant and unavoidable impacts to conflicting with applicable air quality plans, resulting in cumulatively considerable net increase of pollutants for which the project region is in non-attainment, exposing sensitive receptors to substantial pollutant concentrations, and resulting in other emissions that could adversely affect a substantial number of people. In comparison to the proposed project, this alternative would have greater quality impacts compared to the proposed project, and impacts would remain significant.

### 7.5.4 Biological Resources

This alternative would intensify development near existing transit. As a result, biological resource impacts would be the same as proposed project. Mitigation measures identified for the project would be applicable to this alternative. Compared to the proposed project impacts would be the same and would be less than significant.

### 7.5.5 Cultural Resources

Cultural resource impacts would primarily be associated with ground disturbance and development of previously undisturbed areas, or impacts to potential historic structures (building additions, demolition, etc.). Development under this alternative would increase intensities near existing transit which could require more ground disturbance and development of undisturbed areas compared to the proposed project. Mitigation measures for the proposed project would be applicable to this alternative and would mitigate potential impacts to archeological resources. However, like the proposed project, this alternative would have the potential to impact historic buildings as a result of redevelopment. Therefore, impacts to potential cultural resources would be the same as the proposed project and would remain significant and unavoidable.

### 7.5.6 Energy

This alternative would result in slightly increase in VMT and fuel use. Additionally, this alternative would increase the intensity of development near existing transit and associated electricity and natural gas use. Construction activities of this alternative would result in greater impacts due to the intensification. Therefore, impacts of this alternative would be slightly greater to the proposed project; but would be less than significant.

### 7.5.7 Geology and Soils

As with the proposed project, individual development projects under this alternative would be required to prepare site-specific geotechnical investigations to evaluate seismic, liquefaction, ground settlement, paleontological resources, and/or soil expansion hazards. All development projects would be required to comply with existing federal, state, and local regulations, such as the California Building Code and statewide General Construction Permit. However, this alternative would increase and intensify development near existing transit, which would subject more buildings, residents, visitors, and employees to geological hazards in the City and SOI, such as strong seismic shaking. Overall, impacts would be similar to the proposed project; and would be less than significant.

### 7.5.8 Greenhouse Gas Emissions

As identified in Table 7-4, this alternative would result in a slight (2 percent) increase in total VMT but a slight decrease in total VMT/SP—a measure of a project's land use efficiency—compared the proposed project. Although the new structures would be more energy efficient than the existing structures, this alternative has the potential to increase energy use from the additional 2,113 dwelling units, despite a 260,220 square feet reduction in non-residential square feet. Like the proposed project, the strategies identified in CAP update would be applicable to this alternative. While the total magnitude of GHG emissions would be greater under this alternative, overall GHG emissions impacts would be reduced because this alternative would improve the City's GHG emissions per service population, which is the overarching goal identified in the California Air Resources Board's 2017 Scoping Plan. Impacts of this alternative would be slightly less; but would still be significant.

### 7.5.9 Hazards and Hazardous Materials

In both this alternative and the proposed project, land uses throughout the City and SOI would be required to comply with existing federal, state, and local regulations governing use, storage, transport, and disposal of hazardous materials and hazardous wastes. Structures built in fire hazard severity zones would be required to comply with building standards in the California Building Code and the California Fire Code. This alternative would result in an intensification of uses near the train station, which could increase potential hazards to individuals working and living within Corona Municipal Airport Influence Area. However, the transit station is not within the airport land use compatibility zones or the airport noise contours. Therefore, as with the proposed project, impacts would be similar, and would be less than significant.

### 7.5.10 Hydrology and Water Quality

This alternative would increase intensity of development near existing transit compared to the proposed project. However, this area is already developed. Furthermore, new development would be required to prepare and implement project-specific WQMPs and SWPPP to reduce stormwater pollutants during operation and construction activities, respectively. Potential impacts on water quality would be the same as the proposed project, and impacts would be less than significant.

### 7.5.11 Land Use and Planning

This alternative would increase intensity of land uses near the transit station. Neither this alternative nor the proposed project would divide an established community. Mitigation measures and policies identified for the General Plan Update would be applicable to this alternative. Therefore, this alternative would ensure that the General Plan is consistent with the current regulations and policies (e.g., wildfire, climate change, complete streets, etc.). However, the General Plan Update has not yet been before ALUC for a determination of consistency; and therefore, impacts associated with this alternative, like the proposed project, are considered to be significant. Therefore, the land use impacts of this alternative would be similar to the proposed project and would be significant.

### 7.5.12 Mineral Resources

This alternative would result in similar impacts to mineral resources as the proposed project. Most active mines would continue to operate, and areas designated as having significant aggregate and mineral resources are zoned General Industrial, Light Industrial, or Mineral Resources and would not preclude mining operations in these MRZ-2 areas. However, mineral resource areas in MRZ-2 could be developed which would preclude future extraction of minerals in these areas. Overall, the impact to mineral resources would be similar to the proposed project, and remain significant and unavoidable.

### 7.5.13 Noise

As this alternative would result in an increase the land use intensity proximate to the transit station. This alternative would increase vehicle trips in this area. However, because a doubling of traffic volumes is needed to increase noise levels by 3 dBA, this alternative is still anticipated to have a less than significant impact on traffic noise. Construction activities associated with this alternative may be slightly more intensive in the area surrounding the transit station. However, construction noise and vibration levels would be similar despite an increase in density. Overall, impacts would be similar to the proposed project, and construction noise impacts would remain significant.

### 7.5.14 Population and Housing

Buildout of this alternative would result in an increase of 2,113 dwelling units and 7,200 people, and a decrease of 285 employees compared to the proposed project. This alternative would assist the City in meeting its housing related goals to a greater extent than the proposed project. Additionally, this alternative would result in a slight decrease in the jobs-housing balance ratio; but overall the job-housing balance would remain stable. Therefore, population and housing impacts of this alternative would be similar compared to the proposed project, and impacts would remain less than significant.

### 7.5.15 Public Services

Impacts on public services, including fire, police, school, and library services, would be slightly increased under this alternative because residential land uses have a slightly higher demand for these services than non-

residential uses. Therefore, impacts would be greater than the proposed project, but would remain less than significant.

## 7.5.16 Recreation

Recreation impacts would be slightly higher under this alternative because buildout of this alternative would increase the number of residents, which would increase the demand on existing parks and recreational facilities. The City's parkland standard is 3 acres of park for every 1,000 residents. The additional 7,200 people would create an additional demand for 21 acres of parkland. However, as identified in Table 5.16-2, *Demand for Public Parks in the City and SOI at General Plan Buildout*, in Section 5.16, *Recreation*, there is sufficient recreational facilities for public use. Additionally, there is 474,167 acres of natural open space in or adjacent to the City plus a number of other park and recreational facilities in the City such as trails, special use and mini parks, recreational programs and amenities, and joint-use school facilities, to serve the additional 7,200 residents. Furthermore, new development would be required to pay development impact fees and/or, dedicate parkland or pay an in-lieu fee, which would prevent the accelerated physical deterioration of existing facilities. Therefore, impacts to recreational facilities would be slightly higher compared to the proposed project, but would be less than significant.

## 7.5.17 Transportation

As identified in Tale 7-4, this alternative would result in a slight (2 percent) increase in total VMT but a slight (<1 percent) decrease in total VMT/SP—a measure of a project's land use efficiency—compared the proposed project. Because this alternative would generate more VMT than the current General Plan, cumulative VMT impacts would remain. However, this alternative would slightly improve project-related VMT impacts compared to the proposed project because of the slight improvement in transportation efficiency as a result of intensification of the land surrounding the transit station. Overall, impacts would be slightly reduced under this alternative compared to the proposed project; however, impacts would remain significant.

## 7.5.18 Tribal Cultural Resources

Impacts to tribal cultural resources would primarily be associated with potential ground disturbance and development of previously undisturbed areas. Impacts to potential tribal cultural resources would be similar to the proposed project. Mitigation measures for the protection of tribal cultural resources would be applicable to this alternative. Additionally, both the proposed project and this alternative would comply with federal and state regulations pertaining to the protection and preservation tribal cultural resources. Therefore, impacts to potential tribal cultural resources would be similar and less than significant.

## 7.5.19 Utilities and Service Systems

Impacts on public utilities (sewer, water, stormwater, solid waste) would be slightly increased under this alternative because the project would result in an increase in population and land use density near the transit station. Existing facilities may be undersized to serve an increase in development. However, individual projects would be subject to City permits, fees, and applications in order to ensure that these projects would not pose

burdens on the existing infrastructure. Therefore, impacts would be greater than the proposed project, but would remain less than significant.

### 7.5.20 Wildfire

Under this alternative, an increase in development intensity would occur near the transit station compared to the proposed project. This area is within a highly urbanized portions of the City and is not within a very high fire hazard severity zone. Therefore, impacts associated with wildfire hazards would be similar to the proposed project, and would be less than significant.

### 7.5.21 Conclusion

#### Ability to Reduce Environmental Impacts

Impacts of this alternative would be similar for aesthetics, agriculture and forestry resources, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, tribal cultural resources, and wildfire. Impacts would be greater for air quality, energy, public services, recreation, and utilities and service systems. Impacts to GHG emissions and transportation would be less than the proposed project.

#### Ability to Achieve Project Objectives

The Transit Oriented Development Alternative would meet all of the project objectives to the same extent as the proposed project.

## 7.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires a lead agency to identify the "environmentally superior alternative" and, in cases where the "No Project" Alternative is environmentally superior to the proposed project, the environmentally superior development alternative must be identified. One alternative has been identified as "environmentally superior" to the proposed project:

- Transit Oriented Development Alternative

The Transit Oriented Development Alternative has been identified as the environmentally superior alternative. As shown in Table 7-5, *Summary of Impacts of Alternatives Compared to the Proposed Project*, and Table 7-6, *Ability of Each Alternative to Meet the Project Objectives,* this alternative lessens impacts to hazards and hazardous materials, while achieving the benefits of the project objectives.

Table 7-5 Summary of Impacts of Alternatives Compared to the Proposed Project

| Topic | Proposed Project | No Project/Existing General Plan Alternative | Transit Oriented Development Alternative |
|---|---|---|---|
| Aesthetics | LTS | = | = |
| Agricultural & Forestry Resources | S/U | = | = |
| Air Quality | S/U | = | + |
| Biological Resources | LTS/M | = | = |
| Cultural Resources | S/U | = | = |
| Energy | LTS | + | + |
| Geology and Soils | LTS/M | = | = |
| GHG Emissions | S/U | + | — |
| Hazards and Hazardous Materials | LTS | = | = |
| Hydrology and Water Quality | LTS | = | = |
| Land Use and Planning | S/U | = | = |
| Mineral Resources | S/U | = | = |
| Noise | S/U | = | = |
| Population and Housing | LTS | = | = |
| Public Services | LTS | = | + |
| Recreation | LTS | = | + |
| Transportation | S/U | Cumulative * Project-Level — | Cumulative = Project-Level — |
| Tribal Cultural Resources | LTS/M | = | = |
| Utilities and Service Systems | LTS | = | + |
| Wildfire | LTS | = | = |

Notes: LTS = Less than Significant; LTS/M = Less than Significant with Mitigation Incorporated; S/U = Significant and Unavoidable
(*) The alternative would eliminate an impact of the proposed project and impacts would be substantially reduced
(—) The alternative would result in less of an impact than the proposed project.
(+) The alternative would result in greater impacts than the proposed project.
(=) The alternative would result in the same/similar impacts as the proposed project.

Table 7-6 Ability of Each Alternative to Meet the Project Objectives

| Objective | Proposed Project | No Project/Existing General Plan Alternative | Transit Oriented Development Alternative |
|---|---|---|---|
| 1. Provide well-designed and accessible residential neighborhoods and commercial and industrial districts to provide opportunities for people to live, work, and play. | Yes | Yes – To a Lesser Extent | Yes |
| 2. Retain and enhance Corona's small-town character and its neighborhoods to provide a diversity of housing, neighborhoods, and amenities. | Yes | Yes – To a Lesser Extent | Yes |
| 3. Restore downtown Corona as the symbolic, functional, and historic core of the city | Yes | Yes – To a Lesser Extent | Yes |
| 4. Ensure that people, goods, and services move safely and efficiently through the city and connect to the larger region. | Yes | Yes – To a Lesser Extent | Yes |
| 5. Improve employment opportunities for Corona's residents by encouraging existing businesses to invest and expand in Corona; recruit clean, high-technology businesses and research-and-development companies; provide jobs that match the skill of Corona's residents; and support the city's economic base through adequate land and infrastructure. | Yes | Yes – To a Lesser Extent | No |
| 6. Ensure that Corona is a safe community for residents, business, and visitors. | Yes | Yes – To a Lesser Extent | Yes |
| 7. Respect and enhance Corona's environmental resources by creating connections between the built and natural environment to increase awareness of and opportunities for enjoyment by Corona's residents and integrate conservation practices to lessen the burden on the environment. | Yes | Yes – To a Lesser Extent | Yes |
| 8. Engage Corona's active citizenry to achieve an efficient and responsive government that works with its citizens and regional agencies to meet collective needs and provide timely and understandable information. | Yes | Yes – To a Lesser Extent | Yes |
| 9. Foster a vibrant community that supports healthy lifestyles, historical resources, arts, education, and culture for all residents | Yes | Yes – To a Lesser Extent | Yes |

# 7.7 REFERENCES

Fehr & Peers. 2019, March 27. Corona General Plan VMT Assessment.

California Air Pollution Control Officer's Association (CAPCOA). 2010, August, Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Governments to Assess Emissions Reductions from Greenhouse Gas Mitigation Measures. https://ww3.arb.ca.gov/cc/capandtrade/auctionproceeds/capcoa_quantifying_ghg_measures.pdf

# 8. Impacts Found Not to Be Significant

California Public Resources Code Section 21003 (f) states: "…it is the policy of the state that… [a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." This policy is reflected in the State California Environmental Quality Act (CEQA) Guidelines (Guidelines) Section 15126.2(a), which states that "[a]n EIR [environmental impact report] shall identify and focus on the significant environmental impacts of the Proposed Project" and Section 15143, which states that "[t]he EIR shall focus on the significant effects on the environment." The Guidelines allow use of an Initial Study to document project effects that are less than significant (Guidelines Section 15063[a]). Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant, and were therefore not discussed in detail in the draft program EIR (EIR).

As described in the Notice of Preparation (NOP) prepared for the proposed project, the City of Corona determined a full-scope EIR would be required to evaluate all impacts within the 18 environmental categories; therefore, all categories are evaluated in Chapter 5, *Environmental Analysis*, of this EIR.

# 8. Impacts Found Not to Be Significant

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# 9. Significant Irreversible Changes Due to the Proposed Project

Section 15126.2(c) of the CEQA Guidelines requires that an Environmental Impact Report (EIR) describe any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. Specifically, the CEQA Guidelines state:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highways improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

In the case of the General Plan Update, implementation would cause the following significant irreversible changes:

- Implementation of the proposed project would include construction activities that would entail the commitment of nonrenewable and/or slowly renewable energy resources; human resources; and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, water, and fossil fuels. Future developments in accordance with the proposed project would require the use of natural gas and electricity, fossil fuels, and water. The commitment of resources required for the construction and operation of the proposed project would limit the availability of such resources for future generations or for other uses during the life of the project.

- An increased commitment of social services and public maintenance services (e.g., police, fire, schools, libraries, and sewer and water services) would also be required. The energy and social service commitments would be long-term obligations in view of the low likelihood of returning the land to its original condition once it has been developed.

- Population growth related to project implementation would increase vehicle trips over the long term. Emissions associated with such vehicle trips would continue to contribute to the South Coast Air Basin's nonattainment designation for ozone ($O_3$) and particulate matter ($PM_{2.5}$ and $PM_{10}$).

# 9. Significant Irreversible Changes Due to the Proposed Project

- Future development in accordance with the City of Corona General Plan Update is a long-term irreversible commitment of vacant parcels of land or redevelopment of existing developed land in the City and its sphere of influence.

Given the low likelihood that the land would revert to lower intensity uses or to its current form, the proposed project would generally commit future generations to these environmental changes.

# 10. Growth-Inducing Impacts of the Proposed Project

Pursuant to Sections 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects will be examined through analysis of the following questions:

- Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?
- Would this project result in the need to expand one or more public services to maintain desired levels of service?
- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which this project could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this EIR.

**Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?**

Approval and implementation of the General Plan Update would not remove obstacles to growth. Portions of the City and SOI are already served by infrastructure. Implementation of the General Plan Update would allow for development of currently undeveloped and redevelopment of existing land uses. This would induce construction of infrastructure extensions and improvements, such as roadways, storms drains, water pipes, solid waste collection systems, and energy/communication extensions toward undeveloped areas of the City and SOI. In addition, the proposed project would increase demand for electricity and natural gas that could require expansion of energy infrastructure, as provided by Southern California Edison and the Southern

# 10. Growth-Inducing Impacts of the Proposed Project

California Gas Company. As infrastructure is extended throughout the City and its SOI, obstacles to growth would be removed. Impacts to existing utilities and service systems and potential needs for future improvements are discussed further in Section 5.19, *Utilities and Service Systems*.

Buildout of the proposed project may require additional firefighting police personnel, and construction of new and/or expanded facilities to improve response times, if necessary. Buildout may also require future construction of new and/or expanded schools in the Corona-Norco Unified School District and the Alvord Unified School District. Currently, the City of Corona would need two additional branch outlet libraries based on benchmarks of city and county libraries across California. Although the General Plan Update would result in up to 39,298 additional residents, this does not necessarily mean that there would be a demand for more library collection items or facility space. Impacts from the proposed project on public services facilities are discussed in detail in Section 5.15, *Public Services*.

Buildout of roadways in the City per roadway classifications in the proposed General Plan Circulation Element would increase roadway capacity to maintain adequate levels of service. This would allow for more efficient multimodal transportation throughout the City and would promote the development of land near these enhanced roadways. Proposed roadway classifications and their impacts are described in Section 5.17, *Transportation.*

**Would this project result in the need to expand one or more public services to maintain desired levels of service?**

As stated above, proposed project buildout may require additional fire and police services, school facilities, and library space to maintain desired levels of service. This would include expanding existing facilities; acquiring land to construct new stations, schools, and libraries; and adequately equipping and staffing new facilities. Section 5.15, *Public Services*, analyzes the impacts of the proposed project on existing public services in more detail.

**Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?**

Implementation of the proposed project would not encourage or facilitate economic effects that could result in other activities that could significantly affect the environment. Buildout of the Corona General Plan Update would increase employment in the City and SOI to 106,474 jobs, adding 31,156 more jobs than existing. Impacts of these job-generating land uses and employment pursuant to the General Plan Update are analyzed throughout Chapter 5 of this DEIR. No additional impacts would occur.

**Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?**

Cities and counties in California periodically update their general plans pursuant to California Government Code Sections 65300 et seq. Thus, approval of the proposed Corona General Plan Update would not set a precedent that could encourage and facilitate other activities that could significantly affect the environment.

# 11. Organizations and Persons Consulted

## City of Corona

Tom Moody, General Manager, Department of Water and Power (water and power)

Mohammed Ibrahim, P.E., Senior Engineer, Department of Public Works

Curtis Showalter, Administrative Services Manager, Department of Water and Power (airport and power)

Nelson Nelson, Public Works Director, Department of Public Works (retired)

Tom Koper, Assistant Public Works Director, Department of Public Works

Dennis Ralls, City Traffic Engineer

Ryan Cortez, Economic Development Coordinator

Kimberly Davidson, Economic Development Manager (former)

David Montgomery-Scott, Library & Recreation Services Director (anything parks, recreation, library)

Joanne Coletta, Community Development Director, Community Development Department (planning)

Terri Manuel, Planning Manager, Community Development Department (retired)

## City of Corona Fire Department

Bryan Young, Fire Chief

Chris Cox, Fire Chief

Cindi Schmitz, Fire Marshal

Gina Moran-McGough, Emergency Services Coordinator

## City of Corona Police Department

Alan Lorton, Police Captain

# 11. Organizations and Persons Consulted

## Corona Historical Society

Richard Winn, Treasurer. Board of Directors. Corona Historical Society

## CALFIRE/Riverside County Fire Department

Jodie Gray, Division Chief

## Corona-Norco Unified School District

John Vondriska, Administrative Director, Facilities

# 12. Qualifications of Persons Preparing EIR

## PLACEWORKS

**JoAnn Hadfield**
Principal, Environmental Services

- BS University of Utah, Urban Planning, 1976.

**Nicole Vermilion**
Associate Principal

- BA Environmental Studies and BS Ecology and Evolutionary Biology, University of California, Santa Cruz, 2002
- MURP, University of California, Irvine, 2005.

**Mark Hoffman**
Associate Principal

- Master of Planning & Development Studies, University of Southern California, 1997
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**Jasmine Osman**
Project Planner

- Master of City Planning, CSU San Diego, 2019
- BA, Sustainability, minor in Geography, California State University, San Diego
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**John Vang, JD**
Senior Associate
Air Quality & GHG

- Master of Urban Planning, Design, & Development, Cleveland State University, 2007
- Juris Doctor, Cleveland-Marshall College of Law, Cleveland State University, 2007
- BA, Anthropology, University of California, Los Angeles, 2001

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Noise and Vibration

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# 12. Qualifications of Persons Preparing EIR

**Dina El Chammas Gass, PE**
Associate Engineer

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# Corona General Plan Technical Update