

**Public Review Draft**

SCH: 2024060037 | January 2025

# 2045 General Plan Reset Draft EIR

for the City of San Carlos





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## EXECUTIVE SUMMARY

# 1. Executive Summary

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This chapter presents an overview of the proposed 2045 General Plan Reset, hereinafter referred to as “proposed project.” This executive summary also provides a summary of the alternatives to the proposed project, identifies issues to be resolved, areas of controversy, and conclusions of the analysis in Chapters 4.1 through 4.18 of this Draft Environmental Impact Report (EIR). For a complete description of the proposed project, see Chapter 3, *Project Description*, of this Draft EIR. For a discussion of alternatives to the proposed project, see Chapter 5, *Alternatives*, of this Draft EIR.

This Draft EIR addresses the environmental effects associated with adoption and implementation of the proposed project. The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An EIR is a public document designed to provide the public, local, and State government decision-makers with an analysis of potential environmental consequences to support informed decision-making.

This Draft EIR has been prepared pursuant to the requirements of CEQA<sup>1</sup> and the State CEQA Guidelines<sup>2</sup> to determine if approval of the identified discretionary actions and related subsequent development could have any significant impacts on the environment. The City of San Carlos (City), as the lead agency, has reviewed and revised as necessary all submitted drafts, technical studies, and reports to reflect its own independent judgment, including reliance on applicable City technical personnel and review of all technical reports. Information for this Draft EIR was obtained from discussions with public service agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments (e.g., air quality, greenhouse gas emissions, noise, and transportation).

## 1.1 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared to assess the environmental effects associated with implementation of the proposed project. The main objectives of this document as established by CEQA are:

- To disclose to decision-makers and the public the significant environmental impacts of proposed activities.
- To identify ways to avoid or reduce environmental damage.
- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.

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<sup>1</sup> The CEQA Statute is found at California Public Resources Code, Division 13, Sections 21000–21177.

<sup>2</sup> The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387.

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- To disclose to the public reasons for agency approval of projects with significant environmental effects.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in the CEQA statute and in the CEQA Guidelines. It provides the information needed to assess the environmental consequences of a proposed project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts. An EIR is also 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. Prior to approving a proposed project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings<sup>3</sup> concerning the project's significant environmental impacts and alternatives, and adopt a Statement of Overriding Considerations<sup>4</sup> if the proposed project would result in significant impacts that cannot be avoided.

### 1.1.1 REPORT ORGANIZATION

This Draft EIR is organized into the following chapters:

- **Chapter 1: Executive Summary.** Summarizes environmental consequences that would result from implementation of the proposed project, describes recommended mitigation measures, and indicates the level of significance of environmental impacts with and without mitigation.
- **Chapter 2: Introduction.** Provides an overview describing the Draft EIR document.
- **Chapter 3: Project Description.** Describes the proposed project in detail, including the characteristics, objectives, and the structural and technical elements of the proposed action.
- **Chapter 4: Environmental Analysis.** Organized into 18 subchapters corresponding to the environmental resource categories identified in CEQA Guidelines Appendix G, *Environmental Checklist*, this chapter provides a description of the physical environmental conditions in the vicinity of the proposed project as they existed at the time the Notice of Preparation (NOP) was published and by referencing historic conditions that are supported with substantial evidence, from both a local and regional perspective. Additionally, this chapter provides an analysis of the potential environmental impacts of the proposed project and recommended mitigation measures, if required, to reduce the impacts to less than significant where possible, and to reduce their magnitude or significance when impacts cannot be reduced to a less-than-significant level. The environmental setting included in each subchapter provides baseline physical conditions to provide a context, which the lead agency uses to determine the significance of environmental impacts resulting from the proposed project. Each subchapter also includes a description of the thresholds used to determine if

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<sup>3</sup> CEQA Guidelines Section 15091.

<sup>4</sup> CEQA Guidelines Section 15093.



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a significant impact would occur; the methodology to identify and evaluate the potential impacts of the proposed project; and the potential cumulative impacts associated with the proposed project.

- **Chapter 5: Alternatives.** Considers alternatives to the proposed project, including the CEQA-required “No Project Alternative” and “environmentally superior alternative.”
- **Chapter 6: CEQA-Required Conclusions and Findings.** Discusses growth inducement, cumulative impacts, unavoidable significant effects, and significant irreversible changes as a result of the proposed project.
- **Chapter 7: Organizations and Persons Consulted.** Lists the people and organizations that were contacted during the preparation of this EIR for the proposed project.
- **Appendices:** The appendices for this document contain the following supporting documents:
  - Appendix A: Notice of Preparation and Scoping Comments
  - Appendix B: Air Quality and Greenhouse Gas Emissions Data
  - Appendix C: Noise Data
  - Appendix D: Transportation Data
  - Appendix E: Proposed General Plan Amendments

### 1.1.2 TYPE AND PURPOSE OF THIS DRAFT EIR

As described in the CEQA Guidelines, different types of EIRs are used for varying situations and intended uses. Because of the long-term planning horizon of the proposed project and the permitting, planning, and development actions that are related both geographically and as logical parts in the chain of contemplated actions for implementation, this Draft EIR has been prepared as a program EIR for the proposed project, pursuant to CEQA Guidelines Section 15168. Once the program EIR has been certified, subsequent projects such as development activities or capital projects within the City of San Carlos must be evaluated to determine whether additional CEQA review is needed. However, where the program EIR addresses the 2045 General Plan Reset’s effects as specifically and comprehensively as is reasonably possible, later activities that are within scope of the 2045 General Plan Reset examined in the program EIR, may qualify for a streamlined environmental review process or may be exempt from environmental review. When a program EIR is relied on for a subsequent activity, the lead agency must incorporate feasible mitigation measures and alternatives developed in the program EIR into the subsequent activities.<sup>5</sup> If a subsequent activity would have effects that are not within the scope of the program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, a Mitigated Negative Declaration, or an EIR unless the activity qualifies for an exemption. For these subsequent environmental review documents, this program EIR will serve as the first-tier environmental analysis to streamline future environmental review.

<sup>5</sup> CEQA Guidelines Section 15168[c] and CEQA streamlining provisions.

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### 1.2 SUMMARY OF THE PROPOSED PROJECT

The proposed project would update the San Carlos 2030 General Plan to amend the future development projections.

The existing buildout capacity of General Plan 2030 would be amended and development projections for 2045 would be incorporated, thus moving the planning horizon forward by 15 years. Additionally, narrative text and specific policies and actions would be updated along with topics that are now required by State mandate or recent Citywide plans or regulations. Chapter 3, *Project Description*, of this Draft EIR includes a detailed description of the proposed project.

### 1.3 SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

This Draft EIR analyzes alternatives to the proposed project that are designed to reduce the significant environmental impacts of the proposed project and feasibly attain most of the proposed project objectives. There is no set methodology for comparing the alternatives or determining the environmentally superior alternative under CEQA. Identification of the environmentally superior alternative involves weighing and balancing all of the environmental resource areas by the City. The following alternatives to the proposed project were considered and analyzed in detail:

- **Alternative 1: No Project Alternative.** Consistent with Section 15126.6(e)(2) of the CEQA Guidelines, the No Project Alternative presents the No Project scenario. Accordingly, under this alternative, the proposed project would not be adopted or implemented, and further development in the city would continue to be subject to existing policies, regulations, development standards, and land use designations under the existing General Plan 2030.
- **Alternative 2: Reduced Non-Residential Buildout Alternative.** This alternative would include the development in the pipeline projects plus 50 percent of the remaining non-residential buildout included in the proposed project.

Chapter 5, *Alternatives*, of this Draft EIR, includes a complete discussion of these alternatives. As discussed in Chapter 5, the Reduced Non-Residential Buildout Alternative is the Environmentally Superior Alternative pursuant to CEQA Guidelines Section 15126.6.

### 1.4 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify 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 City of San Carlos, as lead agency, related to:

- Whether this Draft EIR adequately describes the environmental impacts of the proposed project.
- Whether the benefits of the proposed project override environmental impacts that cannot be feasibly avoided or mitigated to a level of insignificance.

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- Whether the identified goals, policies, or mitigation measures should be adopted or modified.
- Whether there are other mitigation measures that should be applied to the proposed project besides those goals, policies, or mitigation measures identified in the Draft EIR.
- Whether there are any alternatives to the proposed project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic objectives.

### 1.5 AREAS OF CONTROVERSY

The City issued an NOP on June 3, 2024. The CEQA-mandated 30-day scoping period for this EIR was between June 3, 2024, and July 3, 2024, during which interested agencies and the public could submit comments about the potential environmental impacts of the proposed project. Following the issuance of the NOP, the City received seven comment letters from State agencies, local organizations, and municipalities.

The following is a discussion of issues that are likely to be of particular concern to agencies and interested members of the public during the environmental review process. Though every concern applicable to the CEQA process is addressed in this Draft EIR, this list is not necessarily exhaustive, but rather attempts to capture concerns that are likely to generate the greatest interest based on the input received during the scoping process.

- Biological Resources (regulatory requirements)
- Hazards and Hazardous Materials (cleanup sites)
- Land Use and Planning (annexation)
- Population and Housing (jobs/housing balance)
- Public Services (schools and developer school impact fees)
- Transportation (regulatory requirements, local transportation analysis)
- Utilities and Service Systems (wastewater disposal)

### 1.6 SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Table 1-1, *Summary of Significant Impacts and Mitigation Measures*, summarizes the conclusions of the environmental analysis in this Draft EIR and presents a summary of significant impacts and mitigation measures identified. For a complete description of potential impacts, including those where no mitigation measures are required, please refer to the specific discussions in Chapters 4.1 through 4.18 of this Draft EIR.

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**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
<b>AESTHETICS</b>			
<i>No significant impacts</i>			
<b>AIR QUALITY</b>			
<b>AQ-2.1:</b> Construction of development projects within the buildout horizon of the proposed project would generate emissions that would exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds and cumulative contribute to the nonattainment designations of the San Francisco Bay Area Air Basin.	<b>S</b>	<p><b>AQ-2.1:</b> Prior to discretionary approval by the City for development projects subject to CEQA (California Environmental Quality Act) review (i.e., discretionary, nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with current BAAQMD methodology for assessing air quality impacts identified in BAAQMD's CEQA Air Quality Guidelines. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the City shall require feasible mitigation measures to reduce air quality emissions. Measures shall require implementation of current BAAQMD Best Management Practices for construction-related fugitive dust emissions. At the time of preparation of this EIR, such practices include:</p> <ul style="list-style-type: none"> <li>▪ Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) at least twice daily or as often as needed to control dust emissions.</li> <li>▪ All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</li> <li>▪ All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.</li> <li>▪ All vehicle speeds on unpaved roads shall be limited to 15 mph.</li> <li>▪ All roadways, driveways, sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seedling or soil binders are used.</li> <li>▪ All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.</li> <li>▪ All trucks and equipment, including their tires, shall be washed off prior to leaving the site.</li> <li>▪ Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compact layer of wood chips, mulch, or gravel.</li> </ul>	<b>SU</b>

S = Significant; SU = Significant and Unavoidable

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**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
<b>AQ-2.2:</b> Operation of development projects under the proposed project could generate operational emissions that exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds for volatile organic compounds (VOC) and nitrogen oxides (NO <sub>x</sub> ).	<b>S</b>	<ul style="list-style-type: none"> <li>■ Prior to the commencement of construction activities, individual project proponents shall post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.</li> </ul> <p>Measures shall be incorporated into appropriate construction documents (e.g., construction management plans) and shall be verified by the City.</p>	<b>SU</b>
		<p><b>AQ-2.2:</b> Prior to discretionary approval by the City for development projects subject to California Environmental Quality Act (CEQA) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project operational air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with BAAQMD methodology in assessing air quality impacts identified in BAAQMD's current CEQA Air Quality Guidelines at the time that the project is considered.</p> <p>If operation-related air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the City shall require the project applicant(s) to incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval or a mitigation monitoring and reporting plan adopted for the project as part of the project CEQA review. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following:</p> <ul style="list-style-type: none"> <li>■ Implementing commute trip reduction programs.</li> <li>■ Unbundling residential parking costs from property costs.</li> <li>■ Expanding bikeway networks.</li> <li>■ Expanding transit network coverage or hours.</li> <li>■ Using cleaner-fueled vehicles.</li> <li>■ Exceeding the current Title 24 Building Envelope Energy Efficiency Standards.</li> <li>■ Establishing on-site renewable energy generation systems.</li> <li>■ Requiring all-electric buildings.</li> <li>■ Replacing gas-powered landscaping equipment with zero-emission alternatives.</li> <li>■ Implementing organics diversion programs.</li> <li>■ Expanding urban tree planting.</li> </ul>	

S = Significant; SU = Significant and Unavoidable

## EXECUTIVE SUMMARY

**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
<b>AQ-3:</b> Construction emissions associated with future development projects could expose air quality-sensitive receptors to substantial toxic air contaminant concentrations and exceed the Bay Area Air Quality Management District's (BAAQMD) project-level and cumulative significance thresholds.	<b>S</b>	<p><b>AQ-3:</b> Prior to discretionary approval by the City, 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, nursing homes) or Overburdened Community, as measured from the property line of the project site to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City 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 BAAQMD. If the HRA shows that the cumulative and project-level incremental cancer risk, noncancer hazard index, and/or PM2.5 exceeds the respective threshold, as established by BAAQMD (all areas of the City and Sphere of Influence), the project applicant will be required to identify best available control technologies for toxics (T-BACTs) and appropriate enforcement mechanisms, and demonstrate that they are capable of reducing potential cancer, noncancer risks, and PM2.5 to an acceptable level. T-BACTs may include but are not limited to:</p> <ul style="list-style-type: none"> <li>▪ Restricting idling on-site beyond Air Toxic Control Measures idling restrictions</li> <li>▪ Electrifying warehousing docks</li> <li>▪ Requiring use of newer equipment</li> <li>▪ Requiring near-zero or zero-emission trucks for a portion of the vehicle fleet based on opening year.</li> <li>▪ Truck Electric Vehicle (EV) Capable trailer spaces.</li> <li>▪ Restricting off-site truck travel through the creation of truck routes.</li> </ul> <p>T-BACTs identified in the HRA shall be included as part of the conditions of approval or a mitigation monitoring and reporting plan adopted for the project as part of the project CEQA (California Environmental Quality Act) review.</p>	<b>SU</b>
<b>BIOLOGICAL RESOURCES</b>			
<i>No significant impacts</i>			
<b>CULTURAL RESOURCES</b>			
<i>No significant impacts</i>			

S = Significant; SU = Significant and Unavoidable

## EXECUTIVE SUMMARY

**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
<b>ENERGY</b>			
<i>No significant impacts</i>			
<b>GEOLOGY AND SOILS</b>			
<i>No significant impacts</i>			
<b>GREENHOUSE GAS EMISSIONS</b>			
<b>GHG-1:</b> Implementation of the proposed project would exceed the greenhouse (GHG) emissions threshold of no net increase from existing conditions and would therefore not make substantial progress toward the long-term GHG reduction goal under Senate Bill (SB) 32 or the carbon neutrality goal under Assembly Bill (AB) 1279.	<b>S</b>	<p><b>GHG-1:</b> The City of San Carlos shall prepare an update to its Climate Mitigation and Adaptation Plan (CMAP) to chart a trajectory to achieve the long-term GHG reduction goal set by AB 1279. The updated CMAP shall be completed within three years of certification of the General Plan EIR. The updated CMAP shall be updated every five years to ensure the City is monitoring the CMAP's progress toward achieving the City's GHG reduction target(s), and the City shall amend the CMAP if it is not achieving such targets. The CMAP update shall consider a trajectory consistent with the GHG emissions reduction goal established under AB 1279 for year 2045, and the latest applicable statewide legislative GHG emission reduction that may be in effect at the time of the CMAP update.</p> <p>The CMAP update shall include the following:</p> <ul style="list-style-type: none"> <li>■ GHG inventories of existing and forecast year GHG levels.</li> <li>■ Tools and strategies for reducing GHG emissions to ensure a trajectory with the long-term GHG reduction goal and carbon neutrality goal for year 2045 of AB 1279.</li> <li>■ Plan implementation guidance that includes, at minimum, the following components consistent with the CMAP update: <ul style="list-style-type: none"> <li>■ Administration and Staffing</li> <li>■ Finance and Budgeting</li> <li>■ Timelines for Measure Implementation</li> <li>■ Community Outreach and Education</li> <li>■ Monitoring, Reporting, and Adaptive Management</li> <li>■ Tracking Tools</li> </ul> </li> </ul>	<b>SU</b>

S = Significant; SU = Significant and Unavoidable

## EXECUTIVE SUMMARY

**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
<b>HAZARDS AND HAZARDOUS MATERIALS</b>			
<i>No significant impacts</i>			
<b>HYDROLOGY AND WATER QUALITY</b>			
<i>No significant impacts</i>			
<b>LAND USE AND PLANNING</b>			
<i>No significant impacts</i>			
<b>NOISE</b>			
<i>No significant impacts</i>			
<b>PARKS AND RECREATION</b>			
<i>No significant impacts</i>			
<b>POPULATION AND HOUSING</b>			
<i>No significant impacts</i>			
<b>PUBLIC SERVICES</b>			
<i>No significant impacts</i>			
<b>TRANSPORTATION</b>			
<b>TRAN-2:</b> The proposed project could exceed the City's VMT significance criteria by generating VMT per service, per capita, and per employee that exceeds a threshold of 15 percent less than the regional average and by increasing total countywide VMT.	<b>S</b>	<b>TRAN-2:</b> The City of San Carlos shall amend its Transportation Demand Management program (San Carlos Municipal Code Chapter 18.25, <i>Transportation Demand Management</i> ) to increase the required trip reduction to the extent feasible.	<b>SU</b>
<b>TRIBAL CULTURAL RESOURCES</b>			
<i>No significant impacts</i>			
<b>UTILITIES AND SERVICE SYSTEMS</b>			
<i>No significant impacts</i>			
<b>WILDFIRE</b>			
<b>WILD-2:</b> Future development during the buildout horizon of the proposed project could increase	<b>S</b>	None available.	<b>SU</b>

S = Significant; SU = Significant and Unavoidable



## EXECUTIVE SUMMARY

**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.			
<b>WILD-5:</b> Future development during the buildout horizon of the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas, Very High Fire Hazard Severity Zones (FHSZ), or Wildland-Urban Interface (WUI), result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.	<b>S</b>	None available.	<b>SU</b>

S = Significant; SU = Significant and Unavoidable

## EXECUTIVE SUMMARY

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## 2. Introduction

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Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Chapter 14, California Code of Regulations, Section 15378[a], the proposed 2045 General Plan Reset is considered a “project” subject to environmental review. The implementation is “an action [undertaken by a public agency] which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment.” This Draft Environmental Impact Report (EIR) provides an assessment of the potential environmental consequences of adoption and implementation of the 2045 General Plan Reset, herein referred to as the “proposed project.”

This Draft EIR identifies mitigation measures and alternatives to the proposed project that would avoid or reduce potentially significant impacts. The Draft EIR also compares the development of the proposed project with the existing baseline condition that is described in detail in each section of Chapter 4, *Environmental Analysis*, of this Draft EIR. The City of San Carlos (City) is the lead agency for the proposed project. This assessment is intended to inform the City’s decision-makers, other responsible agencies, and the public-at-large of the nature of the proposed project and its potential effect on the environment.

### 2.1 PROPOSED ACTION

If approved by the San Carlos City Council, the proposed project would update the San Carlos 2030 General Plan to amend the future development projections. The proposed project also involves limited updates to the General Plan background text and policies. Proposed amendments to the General Plan policies and actions are presented in Appendix E, *Proposed General Plan Amendments*, of this Draft EIR. Information within Appendix E does not include changes to the General Plan format, background information, or narrative language, which will be identified when the General Plan is released.

The existing buildout capacity of General Plan 2030 would be amended and regional forecasts for 2045 would be incorporated, thus moving the planning horizon forward by 15 years. Additionally, narrative text and specific policies and actions would be updated along with topics that are now required by State mandate or recent Citywide plans or regulations. Chapter 3, *Project Description*, of this Draft EIR includes a detailed description of the proposed project.

The environmental analysis in this Draft EIR assumes that the adoption and implementation of the proposed project would result in up to 8,300 new housing units, 15,620 new residents, 8,927,300 new non-residential square footage, and 26,530 new employees by 2045. See Chapter 3, *Project Description*, of this Draft EIR for additional details on the proposed project. See Chapter 5, *Alternatives*, of this Draft EIR for a comparison of the potential environmental effects of the current General Plan 2030 and the proposed 2045 General Plan Reset.

## INTRODUCTION

### 2.2 EIR SCOPE

This Draft EIR is a program EIR that analyzes the adoption and implementation of the proposed project. This is in contrast to a project-level EIR, which is used to identify and analyze the potential impacts of site-specific construction and operation. CEQA and the CEQA Guidelines allow lead agencies to prepare different types of EIRs for varying situations and intended uses. Section 15168 of the CEQA Guidelines states that program EIRs are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria.

In this case, the proposed project that is the subject of this Draft EIR consists of long-term plans that would be implemented over time as policies guiding future development activities and City actions. No specific development projects are proposed as part of the proposed project, and decisions about whether to move forward with development projects on individual properties will continue to be made by the property owner. Therefore, as a program EIR, it is not project specific and does not evaluate the impacts of individual projects that may be proposed in the future under the 2045 General Plan Reset. However, where the program EIR addresses the effects of the proposed project as specifically and comprehensively as is reasonably possible, later activities that are within the scope of the effects examined in the program EIR may qualify for a streamlined environmental review process or may be exempt from environmental review.<sup>1</sup>

When a program EIR is relied on for a subsequent activity, the lead agency must incorporate feasible mitigation measures and alternatives developed in the program EIR into the subsequent activities.<sup>2</sup> If a subsequent activity would have effects that are not within the scope of the program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, a Mitigated Negative Declaration, or an EIR, unless the activity qualifies for an exemption. For these subsequent environmental review documents, this program EIR will serve as the first-tier environmental analysis to streamline future environmental review.

### 2.3 ENVIRONMENTAL REVIEW PROCESS

#### 2.3.1 DRAFT EIR

Pursuant to CEQA Section 21080(d) and CEQA Guidelines Section 15063, the City determined that the proposed project could result in potentially significant environmental impacts and that a program EIR would be required. In compliance with CEQA Section 21080.4, the City circulated the Notice of Preparation (NOP) of an EIR for the proposed project to the Office of Land Use and Climate Innovation (formerly known as Office of Planning and Research) State Clearinghouse and interested agencies and persons on June 3, 2024, for a 30-day review period. A public scoping meeting was held on June 17, 2024, at the City Hall. The NOP and scoping process solicited comments regarding the scope of the Draft

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<sup>1</sup> CEQA Guidelines Section 15168(c) and CEQA streamlining provisions.

<sup>2</sup> CEQA Guidelines Section 15168(c)(3) and CEQA streamlining provisions.

## INTRODUCTION

EIR from responsible and trustee agencies and interested parties. Appendix A, *Notice of Preparation and Scoping Comments*, of this Draft EIR contains the NOP and the comments received by the City in response to the NOP.

This Draft EIR will be available for review by the public and interested parties, agencies, and organizations for a 45-day comment period starting January 17, 2025, and ending March 3, 2025. During the comment period, the public is invited to provide written comments on the Draft EIR via mail or email to the City of San Carlos Community Development Department, Advance Planning Division by 5:00 p.m. on March 3, 2025. Comments should be submitted as follows:

- Written: Akanksha Chopra, Associate Planner  
City of San Carlos  
600 Elm Street  
San Carlos, California, 94070
- Phone: (650) 802-4350
- Email: AdvancePlanning@cityofsancarlos.org with “2045 General Plan Reset EIR” as the subject line.

### 2.3.2 FINAL EIR

Upon completion of the public review period for the Draft EIR, the City will review all written comments received and prepare written responses to each comment on the adequacy of the Draft EIR. A Final EIR will then be prepared, which contains all of the comments received, responses to comments raising environmental issues, and any changes to the Draft EIR. The Final EIR will then be presented to the San Carlos Planning and Transportation Commission where a public hearing will be held for public comments on the Final EIR. During this public hearing, recommendations will also be considered for certification of the Final EIR. Following the public hearing, the Final EIR will be presented to City Council for consideration of the certification as the environmental document for the proposed project. All persons who commented on the Draft EIR will be notified of the availability of the Final EIR and the date of the public hearing, which is tentatively scheduled for February 3, 2025.

All responses to comments submitted on the Draft EIR by agencies will be provided to those agencies at least 10 days prior to certification of the EIR. The City Council will make findings regarding the extent and nature of the impacts as presented in the EIR. The EIR will need to be certified as having been prepared in compliance with CEQA by the City prior to making a decision to approve or deny the proposed project. Public input is encouraged at all public hearings before the City.

If the City Council certifies the EIR, it may then consider action on the proposed project. If approved, the City Council would adopt and incorporate all feasible mitigation measures identified in the EIR and may also require other feasible mitigation measures.

In some cases, the City Council may find that certain mitigation measures are outside the jurisdiction of the City to implement, or that no feasible mitigation measures have been identified for a given significant impact. In that case, the City Council would have to adopt a statement of overriding

## INTRODUCTION

considerations that determines that economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable, significant effects on the environment.

### 2.3.3 MITIGATION MONITORING

CEQA Section 21081.6 requires that the lead agency adopt a Mitigation Monitoring and Reporting Program (MMRP) for any project for which it has made findings pursuant to CEQA Section 21081. Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR. If mitigation measures are required, the MMRP for the proposed project will be completed congruently as part of the Final EIR process.

## 2.4 ENVIRONMENTAL REVIEW FOR FUTURE DEVELOPMENT PROJECTS AND ACTIVITIES

CEQA includes several provisions to streamline the environmental review of qualified projects based on several factors. These include where environmental review has already occurred (e.g., a program-level EIR), which could apply to future development on the project site. As a program EIR, this document and the mitigation measures presented herein will be used as a guide for implementing the proposed project. This program EIR will also be used as a base resource for reviewing future development projects. As discussed in Section 2.2, *EIR Scope*, later activities consistent with the proposed project will be reviewed to determine whether they are within the scope of this program EIR. Pursuant to CEQA Guidelines Section 15168(c)(2), for future activities that do not require subsequent environmental review, the City can approve the activity as being within the scope of the project analyzed in this program EIR. CEQA Guidelines Section 15168(d) provides for simplifying the preparation of environmental documents by incorporating by reference analyses and discussions in the program EIR. Where an EIR has been prepared or certified for a program or plan, the environmental review for a later activity consistent with the program or plan should be limited to effects that were not analyzed as significant in the prior EIR or that are susceptible to substantial reduction or avoidance.

If a subsequent activity would have effects that are not within the scope of the program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, a Mitigated Negative Declaration, or an EIR, unless the activity qualifies for an exemption. This document will assist in guiding the assessment of projects and provide environmental review tiering, where appropriate.

The CEQA concept of “tiering” refers to the evaluation of general environmental matters in a broad program-level EIR, with subsequent focused environmental documents for individual projects. CEQA and the CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process. This is accomplished in tiered documents by eliminating repetitive analyses of issues that were adequately addressed in the program EIR and by incorporating those analyses by reference.

## INTRODUCTION

When tiering from the program EIR, the environmental analysis for a future project implementing the proposed project would rely on the program EIR for the following:

1. A discussion of general background and setting information for environmental topic areas;
2. Overall growth-related issues;
3. Issues that were evaluated in sufficient detail in the program EIR for which there is no significant new information or change in circumstances that would require further analysis;
4. Assessment of cumulative impacts; and
5. Mitigation measures adopted and incorporated into the proposed project.

## INTRODUCTION

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### 3. Project Description

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This chapter of the Draft Environmental Impact Report (EIR) describes the proposed update to the City of San Carlos 2030 General Plan, hereinafter referred to as the 2045 General Plan Reset or “proposed project.” This project description has been prepared pursuant to the California Environmental Quality Act (CEQA).<sup>1</sup> The proposed project includes new development associated with implementation of the proposed project. The potential buildout under the proposed project is discussed in Section 3.5.2, *2045 Development Projections*, of this chapter.

This Draft EIR has been completed in accordance with CEQA, which requires that State and local public agencies analyze proposed projects to determine potential impacts on the environment and disclose any such impacts.<sup>2</sup> The City is the lead agency for the environmental review of the proposed project. Chapter 4, *Environmental Analysis*, of this Draft EIR provides a programmatic analysis of the environmental impacts associated with projected development under the proposed project by 2045. Program-level environmental review documents are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria.<sup>3</sup> The proposed project that is the subject of this EIR consists of a long-term plan that will be implemented as a policy document guiding future development activities and City actions. Because this is a program-level EIR, this document does not evaluate the impacts of specific, individual development projects that may be allowed under the 2045 General Plan Reset. Future projects may require separate environmental review.

This chapter provides a detailed description of the proposed project, including the location, setting, and characteristics of the EIR Study Area, as well as the project objectives, the principal project components, and required permits and approvals.

#### 3.1 BACKGROUND

Every city and county in California is required to have an adopted comprehensive long-range general plan for the physical development of the county or city and, in some cases, land outside the city or county boundaries.<sup>4</sup> It is the community’s overarching policy document that defines a vision for future change and sets the “ground rules” for locating and designing new projects, supporting the local economy, conserving resources, improving public services and safety, and fostering community health. The General Plan, which includes a vision, guiding principles, goals, policies, and actions, functions as the City’s primary land use regulatory tool. It is San Carlos’ constitution for future change and must be used

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<sup>1</sup> CEQA Guidelines Section 15126.

<sup>2</sup> CEQA Guidelines Section 15002(a).

<sup>3</sup> CEQA Guidelines Section 15168.

<sup>4</sup> California Government Code Section 65300.

## PROJECT DESCRIPTION

as the basis for all planning-related decisions made by City staff, the Planning and Transportation Commission, and the City Council.

Pursuant to State law, mandatory elements for all jurisdictions are: land use, circulation, housing, conservation, open space, noise, and safety; organized in any way that best suits the city or county. Typically, general plans cover a time frame or forecast of 15 to 20 years.

The existing San Carlos 2030 General Plan (General Plan 2030) was adopted in 2009 and included a horizon year of 2030. Six elements of the General Plan 2030 (housing, safety, land use, circulation and scenic highways, environmental management, and noise) were amended in 2023. This focused update is necessary to respond to continued interest in new development throughout the city, including housing, and extend the planning horizon to 2045. The 2045 General Plan Reset project includes the elements required by State law,<sup>5</sup> organized into chapters as follows: 3) Land Use; 4) Housing; 5) Circulation and Scenic Highways; 6) Environmental Management; 7) Parks and Recreation; 8) Environmental Safety and Public Services; and 9) Noise. Chapters 1 and 2 contain the Introduction and Vision Statement, respectively. At this time, two specific plans are currently underway in the City of San Carlos. These specific plans will have a horizon year of 2045; the anticipated amount of new development under the specific plans has been incorporated into the development projections for this 2045 General Plan Reset project, and will be analyzed as part of this EIR. The specific plans will be acted upon separately.

General Plan Housing Elements are required to be updated every eight years to fulfill the Regional Housing Needs Allocation (RHNA) and comply with State law. To meet the State deadline, San Carlos' 6<sup>th</sup> cycle Housing Element was adopted in 2023 and certified by the State Department of Housing and Community Development in April 2024; this Housing Element was evaluated under a separate EIR (State Clearinghouse #2021120442). The 6<sup>th</sup> cycle Housing Element is not part of the proposed project analyzed in this EIR.

All plans, including precise plans, specific plans, master plans, and zoning in the city must be consistent with the General Plan. Similarly, all land-use development approvals and environmental decisions made by the City Council must be consistent with the General Plan. The General Plan itself, however, does not approve or entitle any development project. Property owners have control over when they wish to propose a project, and final development approval decisions are made on a project-by-project basis by City staff, the Planning and Transportation Commission, other City boards and commissions as appropriate, and/or the City Council. Accordingly, this Draft EIR addresses only what the City foresees at this time. Future projects that exceed the proposed buildout or boundaries addressed in this Draft EIR will be subject to additional environmental review, as required pursuant to CEQA and the CEQA Guidelines.

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<sup>5</sup> Pursuant to State law, a general plan must contain mandatory elements, but has complete autonomy for how they format and organize the elements. Mandatory topics include: land use, circulation, housing, conservation, open space, noise, safety, and environmental justice.

## PROJECT DESCRIPTION

### 3.2 LOCATION AND SETTING

San Carlos is in eastern San Mateo County. It is generally bounded by Belmont to the north, the San Francisco Bay to the east, Redwood City to the south, and Interstate 280 (I-280) to the west. See Figure 3-1, *Regional and Local Vicinity Map*. The city is accessed by US Highway 101 and State Route (SR) 82 as well as one Caltrain transit station. I-280 also provides regional access to the community and is located just west of the City's Sphere of Influence (SOI). San Carlos includes a range of urban and suburban land uses, including a variety of residential neighborhoods, parks, and commercial and office areas. San Carlos' built-out environment is largely consistent with the built-out environments of adjacent communities.

#### 3.2.1 CITY LIMIT

The San Carlos city limit encloses an area of approximately 5.4 square miles. The City has primary authority over land use and other governmental actions within this area. Certain unincorporated areas outside of the city limit may still have a San Carlos mailing address and may share certain services with the city. This includes the three unincorporated neighborhoods of Devonshire, Palomar Park, and Pulgas Ridge, which are not within San Carlos' city limit, but are within San Carlos' SOI.

#### 3.2.2 SPHERE OF INFLUENCE

The SOI is a boundary that identifies land that the City may potentially annex in the future, and for which urban services, if available, could be provided upon annexation. Under State law, the SOI is established by the San Mateo County Local Agency Formation Commission (LAFCO) with input from the City. The purpose of the SOI is to identify areas where urban development could be accommodated in the future in an orderly and efficient manner. The San Carlos SOI is approximately 1.3 square miles in size.

Unincorporated areas adjacent to the San Carlos city limit fall under the planning, land use, and regulatory jurisdiction of San Mateo County. While the City does not have jurisdiction over land within the SOI, designating a SOI sets precedence for ensuring that the City is able to comment on development proposed for lands within the SOI prior to annexation and begin considering future development of the area. The City does not propose to annex any areas within the SOI as part of the proposed project. Any future annexations that may occur within the 2045 planning horizon would be analyzed under separate environmental review.

### 3.3 EIR STUDY AREA

The State of California encourages cities to look beyond their borders when undertaking the sort of comprehensive planning required for a general plan. The City only has jurisdiction over land that is within the city limit. However, the City maintains a role in land use decisions in its SOI. Therefore, the EIR Study Area consists of all land within the City of San Carlos' city limit and SOI. These areas are shown on Figure 3-2, *EIR Study Area*. See Chapter 4, *Environmental Analysis*, for a description of the cumulative

## PROJECT DESCRIPTION

impact scope for this EIR, which may include lands within the Study Area and beyond, depending on the environmental topic being analyzed.

### 3.4 PROJECT OBJECTIVES

The primary purpose of the proposed project is to plan for the growth of San Carlos over a 20-year time horizon and to:

- Allow for a mix of development to support the City's economic resiliency and to sustain a robust local economy.
- Preserve, protect, and promote industrial, commercial, and office uses to maintain a thriving ecosystem of local businesses and to provide for local jobs.
- Provide a mix of housing that meets the needs of a diverse community, as outlined in the 2023-2031 Housing Element and for future Housing Element cycles.
- Make minor updates to the 2030 General Plan to reference recent City initiatives, plans, or new State regulations.

### 3.5 PROJECT COMPONENTS

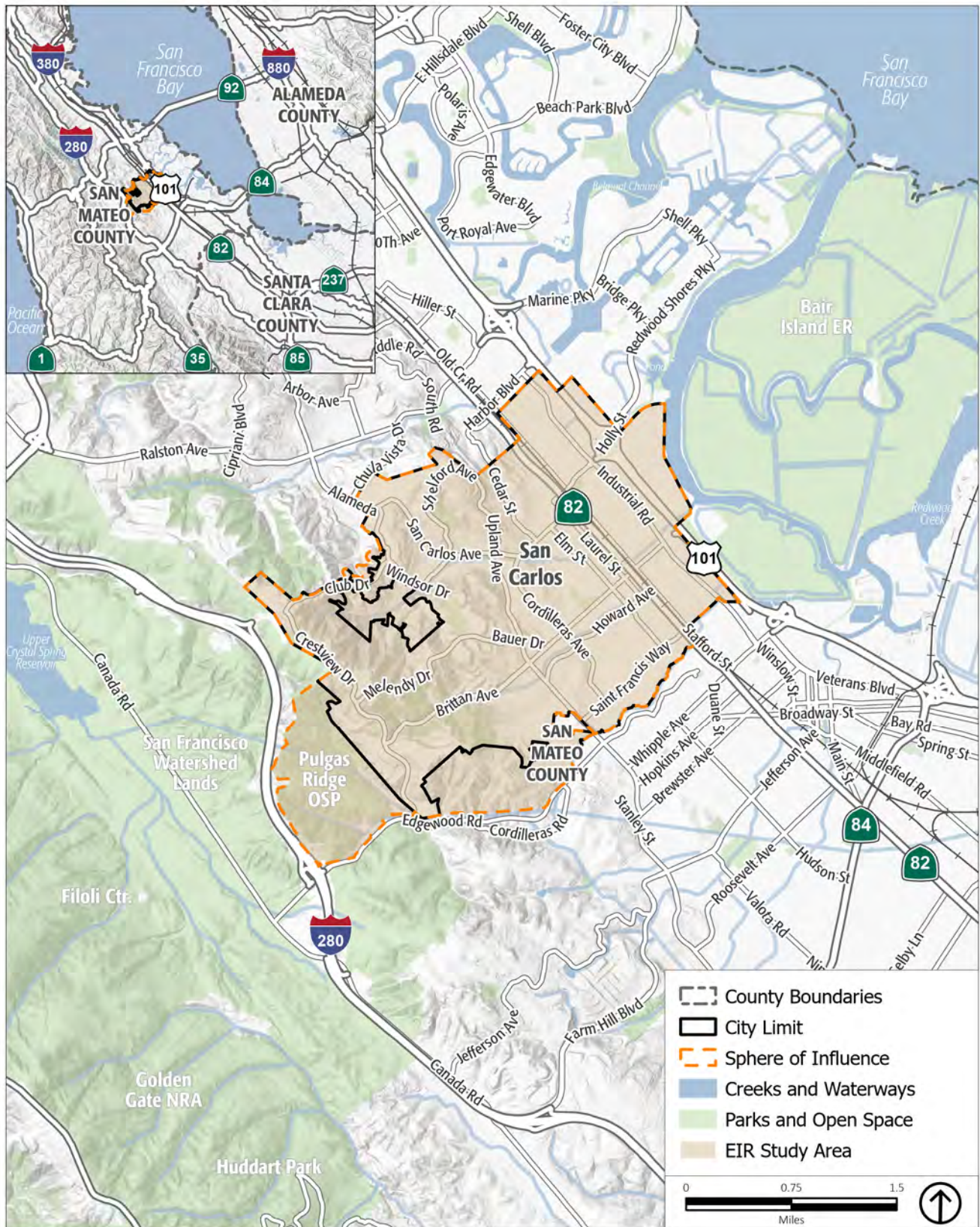
The primary focus of the proposed project is to update the San Carlos 2030 General Plan to amend the future development projections. The proposed project also involves limited updates to the General Plan background text and policies.

The draft 2045 General Plan Reset is available for public review concurrent with this Draft EIR on the City's website at the following link: [www.CityofSanCarlos.org/2045GeneralPlanReset](http://www.CityofSanCarlos.org/2045GeneralPlanReset)

#### 3.5.1 PLANNING PROCESS

The City initiated the 2045 General Plan Reset planning process in 2023. There are currently a variety of planning efforts being undertaken in the city, as well as ongoing development projects. As described above, of these planning efforts, two specific plans are the Northeast Area Specific Plan and Downtown Specific Plan, which are being prepared concurrently with the proposed project and are expected to be adopted following adoption of the 2045 General Plan Reset. An EIR is being prepared separately for the Northeast Area Specific Plan. Meanwhile, the Downtown Specific Plan is designed to be consistent with the proposed project and an EIR Addendum would be prepared for the Downtown Specific Plan after certification of the EIR for this proposed project. Both Specific Plans include buildout projections that are incorporated into the citywide buildout capacity for the proposed project. These buildout numbers are available in Section 3.5.2, *2045 Development Projections*.

## PROJECT DESCRIPTION

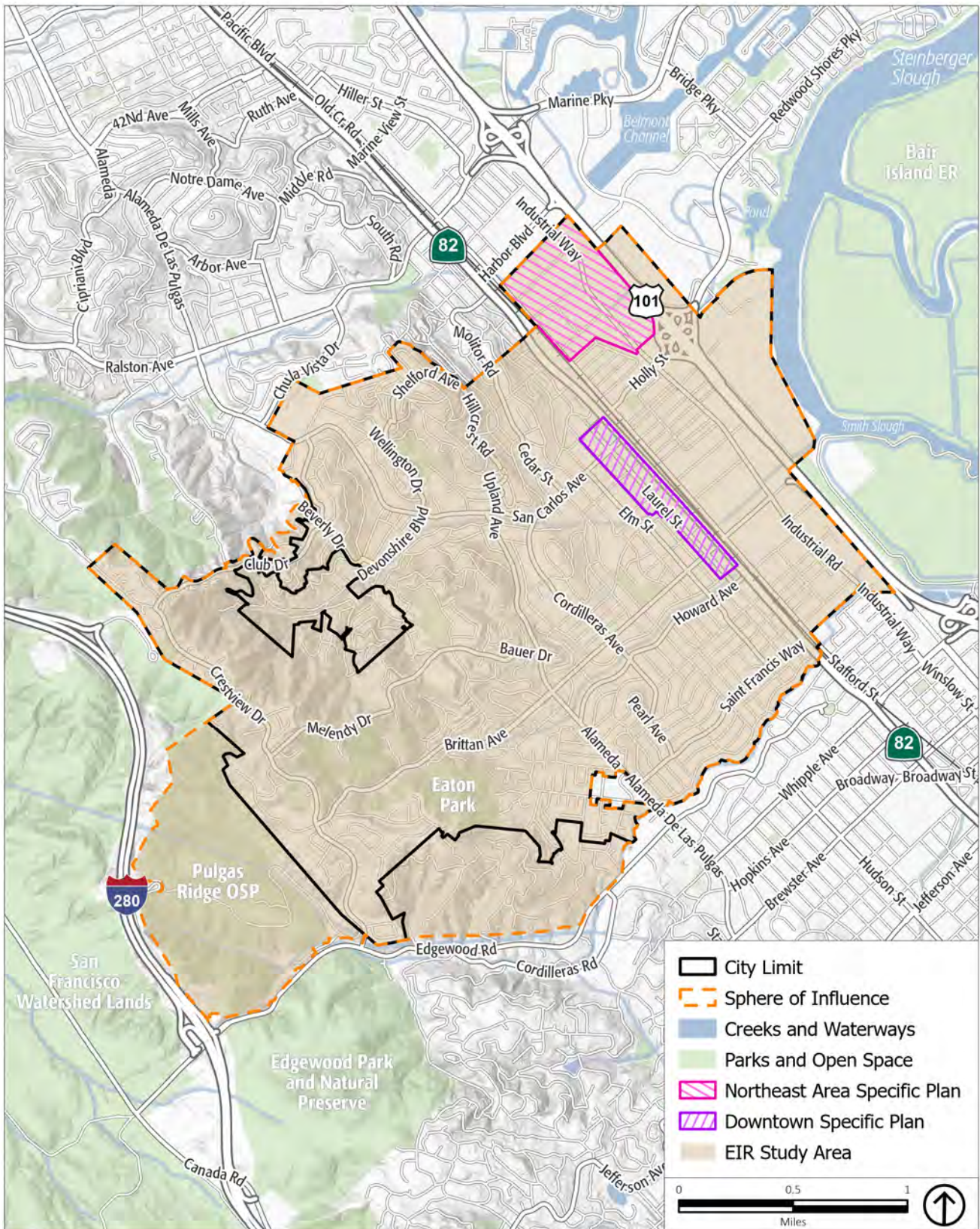


Source: City of San Carlos, 2024; PlaceWorks, 2024.

Figure 3-1  
Regional and Local Vicinity



## PROJECT DESCRIPTION



Source: City of San Carlos, 2024; PlaceWorks, 2024.

Figure 3-2  
EIR Study Area

## PROJECT DESCRIPTION

### 3.5.2 2045 DEVELOPMENT PROJECTIONS

The 2045 General Plan Reset considers development projections between the time period of 2024 and 2045, which represents an approximate 20-year buildout horizon. Under Section 15064(d) of the CEQA Guidelines, “In evaluating the significance of the environmental effect of a project, the lead agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project.” The projections represent the City’s estimation of “reasonably foreseeable” development that could occur over the next 20 years under the proposed project and are used as the basis for the EIR’s environmental assessment.

The projections do not presume that every parcel is developed to the maximum level allowed under the 2045 General Plan Reset. Based on historical development patterns, it is unlikely that the maximum theoretical buildout allowed under the proposed 2045 General Plan Reset would occur because not every parcel that is allowed to develop within that timeframe will develop, and not every parcel that develops will be built out to the maximum allowed under the proposed 2045 General Plan Reset. Therefore, the maximum theoretical buildout is not a reasonably foreseeable outcome of the adoption of the proposed 2045 General Plan Reset. Instead, this EIR analyzes a conservative, but reasonably foreseeable, amount of growth based on development trends, market demand forecasts, and housing obligations under State law. Horizon year (2045) projections within the EIR Study Area are shown in Table 3-1, *Proposed 2045 General Plan Reset Buildout Projections in the EIR Study Area*.

**TABLE 3-1 PROPOSED 2045 GENERAL PLAN RESET BUILDOUT PROJECTIONS IN THE EIR STUDY AREA**

Category	Existing Conditions (2024)			Projected Net Change (2024-2045)			2045 General Plan Reset Buildout (2045)		
	City	SOI	Total	City	SOI	Total	City	SOI	Total
Housing Units	12,460	790	<b>13,250</b>	8,300	0	<b>8,300</b>	20,770	790	<b>21,560</b>
Population	28,890	1,940	<b>30,830</b>	15,620	0	<b>15,620</b>	44,510	1,940	<b>46,450</b>
Non-Residential Square Footage <sup>a</sup>	9,776,200	100,000	<b>9,876,200</b>	8,927,300	0	<b>8,927,300</b>	18,703,500	100,000	<b>18,803,500</b>
Jobs <sup>b</sup>	20,410	370	<b>20,780</b>	26,530	0	<b>26,530</b>	46,950	370	<b>47,320</b>

Notes: SOI = sphere of influence

a. Non-residential square footage includes commercial, office, research and development (R&D), and industrial square footage and does not include public uses.

b. Job numbers include commercial, office, R&D, industrial, and other jobs, including public jobs.

Source: PlaceWorks, 2024.

As shown in Table 3-1, the City expects approximately 26,530 net new jobs in the EIR Study Area by 2045, which correlates to approximately 8,927,300 square feet of net new non-residential development. The buildout projections in Table 3-1 include growth associated with current development projects, buildout of the Downtown Specific Plan and Northeast Area Specific Plan, development of the sites in the City’s 2023-2031 Housing Element Sites Inventory, development of ADUs and units under Senate Bill

## PROJECT DESCRIPTION

9 as allowed under State housing law, and estimated future housing development under future RHNA cycles.<sup>6</sup>

The majority of new housing in San Carlos is expected on infill parcels near Downtown, along the El Camino Real corridor, along Old County Road between Holly Street and Terminal Avenue, and along East San Carlos Avenue. These units will mostly be multiple family residences, such as apartments, townhouses, or condominiums. New detached residences will likely occur as accessory dwelling units (ADUs) and as rebuilt or remodeled homes in existing single-family neighborhoods.

Most of the commercial growth is expected to occur in the Downtown area. Most of the office growth is expected in the Downtown and Northeast areas. Research and development and industrial growth would be limited to the east side area of San Carlos, including the Northeast Area.

The buildout numbers in Table 3-1 are different than those represented in Table 3-3 of the 2045 General Plan Reset both because, unlike the General Plan, the development projections for the EIR include the SOI and because the 2045 General Plan Reset considers development projects already in the pipeline as part of the existing conditions, whereas the EIR considers them as part of net new development. As shown in Table 3-2, *Projected Net Change*, development projects already in the pipeline and anticipated under the Downtown Specific Plan and Northeast Area Specific Plan constitute a substantial amount of the projected development under the 2045 General Plan Reset.

**TABLE 3-2 PROJECTED NET CHANGE**

Category	Net Change from Pipeline Development Projects	Net Change from Downtown Specific Plan	Net Change from Northeast Area Specific Plan	Additional Net Change	Total Projected Net Change (2024-2045)
Housing Units	242	1,565	1,890	4,063	8,300
Population	462	2,990	3,611	8,557	15,620
Non-Residential Square Footage	2,688,000	420,820	4,178,228	1,640,252	8,927,300
Jobs	8,525	908	12,990	4,107	26,530

Source: PlaceWorks, 2024.

Table 3-3, *Non-Residential Square Footage Projections*, provides a summary of the land uses included in the non-residential square footage buildout projections under existing and future conditions in the EIR Study Area.

<sup>6</sup> Senate Bill 9 (Chapter 162, Statutes of 2021) requires ministerial approval for housing developments with no more than two primary units in a single-family zone, and the subdivision of parcels in a single-family zone into two parcels.



## PROJECT DESCRIPTION

**TABLE 3-3 NON-RESIDENTIAL SQUARE FOOTAGE PROJECTIONS**

Non-Residential Square Footage Category	Existing Conditions (2024)	Projected Net Change (2024-2045)	2045 General Plan Reset Buildout (2045)
Commercial	1,511,000	(551,500)	959,500
Office	1,462,500	343,700	1,806,200
Research & Development	2,199,400	8,476,600	10,676,000
Industrial	4,703,300	658,500	5,361,800
<b>Total</b>	<b>9,876,200</b>	<b>8,927,300</b>	<b>18,803,500</b>

Source: PlaceWorks, 2024.

### 3.5.3 GENERAL PLAN AMENDMENTS

This section gives an overview of the General Plan amendments that would occur as part of the proposed project. Proposed amendments to the General Plan policies and actions are presented in Appendix E, *Proposed General Plan Amendments*, of this Draft EIR. Information within Appendix E does not include changes to the General Plan format, background information, or narrative language, which will be identified when the General Plan is released.

Many of the General Plan amendments would focus on updating the introduction, purpose, and background language that provides context for the policies and actions within the General Plan. Other amendments would create consistency with the updated buildout projections.

Chapters and content within the General Plan 2030 that would be amended by the proposed project include:

- **Chapter 1 and 2 – Introduction.** Land acknowledgement, narrative, and background information.
- **Chapter 3 - Land Use Element.** Narrative, existing conditions, future development projections, and policy and action language pertaining to the Transportation Demand Management Ordinance and cultural, historical, and tribal cultural resources.
- **Chapter 5 - Circulation and Scenic Highways Element.** Narrative and policy language related to the Transportation Demand Management Ordinance and compliance with the Americans with Disabilities Act.
- **Chapter 6 - Environmental Management Element.** Background information on wastewater and stormwater and policy updates incorporating bird safe design guidelines and hydrology.
- **Chapter 7 – Parks and Recreation.** Policy update related to implementing the City’s Potential Trail Connections Plan.
- **Chapter 9 – Noise Element.** Narrative and policy language related to the existing airport Comprehensive Airport Land Use Compatibility Plan and the City’s noise ordinance. Policy updates in this element focus on increasing consistency between the noise policies and criteria contained in the Comprehensive Airport Land Use Compatibility Plan and therefore do not have the potential to create an environmental impact.

## PROJECT DESCRIPTION

As described above, none of the General Plan amendments, apart from the updated buildout projections, involve new policies or actions with the potential to create an environmental impact. Therefore, the analysis in this EIR is focused on the amount of development projected under 2045 General Plan Reset.

### 3.5.4 GENERAL PLAN LAND USE

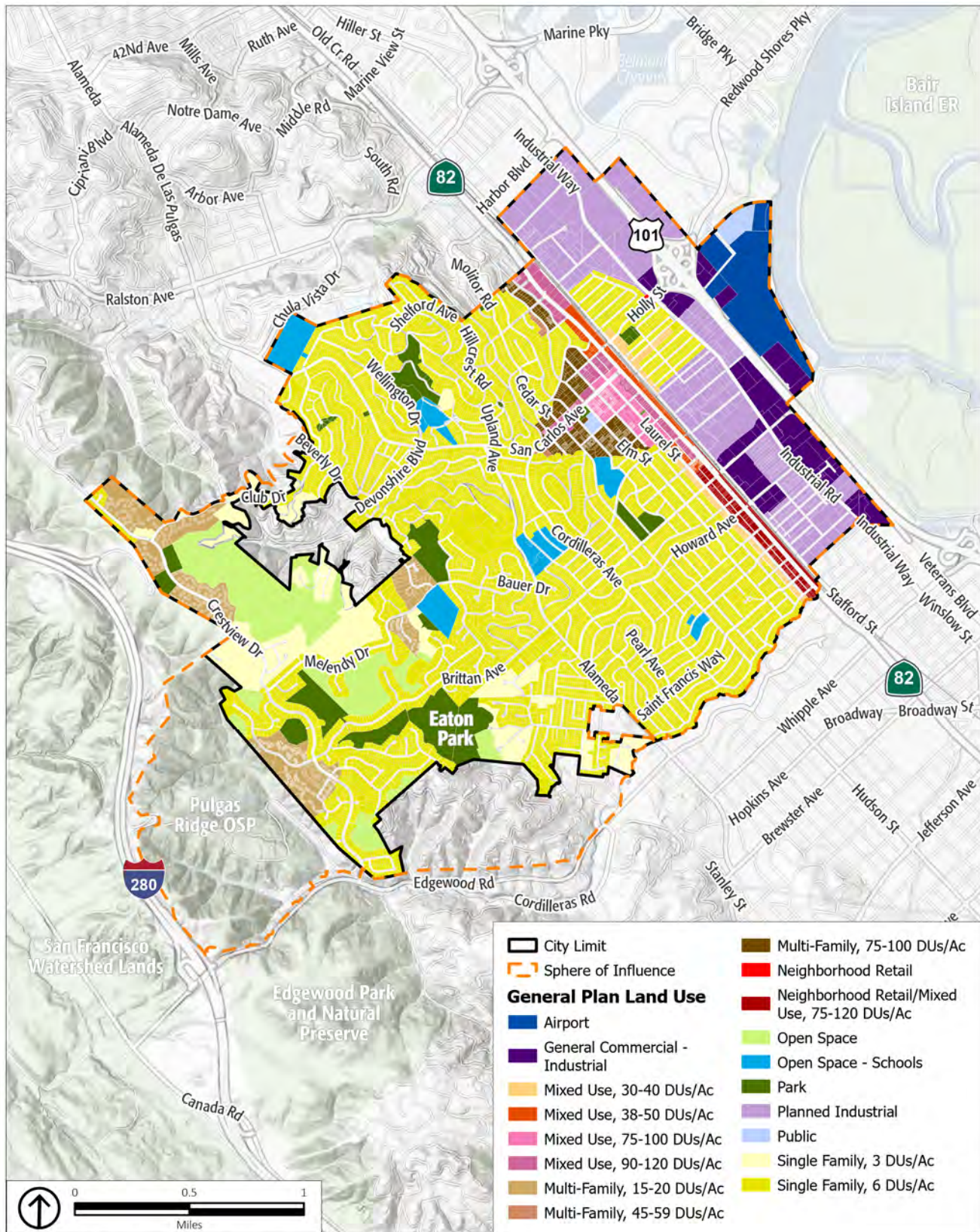
The Land Use Element of the City of San Carlos General Plan defines 19 land use designations by their allowable uses and maximum densities and intensities. The proposed project does not involve changes to the land use designations or map. The General Plan land use designations as applied to properties in the EIR Study Area are mapped in Figure 3-3, *General Plan Land Use Designations*. Acreages of these land use designations within the EIR Study Area are provided in Table 3-4, *General Plan Land Use Designations*. Although two specific plans are currently underway and will propose modifications to land uses, including the introduction of housing in the Northeast Area Specific Plan, these future land use changes are not considered as part of the 2045 General Plan Reset project evaluated in this EIR.

**TABLE 3-4 GENERAL PLAN LAND USE DESIGNATIONS**

Land Use Designation	Acreage	Percent of Total Acreage
Airport	87	3%
General Commercial – Industrial	118	5%
Mixed Use, 30-40 DUs/Ac	20	1%
Mixed Use, 38-50 DUs/Ac	18	1%
Mixed Use, 75-100 DUs/Ac	24	1%
Mixed Use, 90-120 DUs/Ac	33	1%
Multi-Family, 15-20 DUs/Ac	126	5%
Multi-Family, 45-59 DUs/Ac	4	<1%
Multi-Family, 75-100 DUs/Ac	47	2%
Neighborhood Retail	1	<1%
Neighborhood Retail/Mixed Use, 75-120 DUs/Ac	24	1%
Open Space	180	7%
Open Space – Schools	71	3%
Park	146	6%
Planned Industrial	307	12%
Public	13	1%
Single Family, 3 DUs/Ac	161	6%
Single Family, 6 DUs/Ac	1,417	55%
Undesignated	7	<1%
<b>Total</b>	<b>2,593</b>	<b>100%</b>

Source: City of San Carlos, 2024.

## PROJECT DESCRIPTION



Source: City of San Carlos, 2024; PlaceWorks, 2024.

Figure 3-3  
General Plan Land Use Designations

## PROJECT DESCRIPTION

### 3.6 INTENDED USES OF THIS EIR

This Draft EIR is intended to review potential environmental impacts associated with the adoption and implementation of the proposed project and determine corresponding mitigation measures, as necessary. This Draft EIR is a program-level EIR and does not evaluate the impacts of specific, individual developments that may be allowed in the future under the proposed project. Each future project will conduct additional environmental review, as required by CEQA, to secure any necessary discretionary development permits. As part of this process, subsequent projects will be reviewed by the City for consistency with the General Plan and this Draft EIR.

Projects successive to this Draft EIR include, but are not limited to, the following:

- Approval and funding of major public projects and capital improvements.
- Issuance of permits and other approvals necessary for implementation of the proposed project.
- Development plan approvals, such as tentative maps, variances, conditional use permits, planned developments, and other land use permits.
- Permit issuances and other approvals necessary for public and private development projects.

Development agreement processes and approvals:

Adoption of Specific Plan(s), e.g. Northeast Area Specific Plan and Downtown Specific Plan

The 2045 housing, population, commercial development, and employment forecasts in this Draft EIR will serve as parameters for environmental analysis for future development projects within San Carlos. In the event that proposed development in the city would exceed the buildout projections used in this Draft EIR, the City would require environmental review for any subsequent development to address growth impacts that would occur as a result of development exceeding the General Plan projections and related Draft EIR assumptions. This does not preclude the City, as lead agency, from determining that an EIR would be required for any development under the relevant provisions of CEQA (e.g., Section 21166 and related guidelines).

### 3.7 REQUIRED PERMITS AND APPROVALS

The proposed project would require adoption by the San Carlos City Council. The Planning and Transportation Commission will review the proposed project and make recommendations to the City Council. While other agencies may be consulted during the 2045 General Plan Reset process, their approval is not required for 2045 General Plan Reset adoption. However, subsequent development under the 2045 General Plan Reset may require approval of State, federal, responsible, and trustee agencies that may rely on the programmatic EIR for decisions in their areas of permitting.

## 4. Environmental Analysis

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This chapter describes the organization of the environmental analysis section of this Draft Environmental Impact Report (EIR) and the assumptions and methodology of the impact analysis and the cumulative impact setting.

### CHAPTER ORGANIZATION

This chapter of the Draft EIR is made up of 18 subchapters that evaluate the direct, indirect, and cumulative environmental impacts of the proposed project. In accordance with Appendix F, *Energy Conservation*, and Appendix G, *Environmental Checklist*, of the California Environmental Quality Act (CEQA) Guidelines, the potential environmental effects of the proposed project are analyzed for potential significant impacts in the following 18 environmental issue areas, which are organized with the listed abbreviations:

4.1	Aesthetics (AES)	4.10	Land Use and Planning (LAND)
4.2	Air Quality (AQ)	4.11	Noise (NOISE)
4.3	Biological Resources (BIO)	4.12	Parks and Recreation (REC)
4.4	Cultural Resources (CUL)	4.13	Population and Housing (POP)
4.5	Energy (ENE)	4.14	Public Services (PS)
4.6	Geology and Soils (GEO)	4.15	Transportation (TRAN)
4.7	Greenhouse Gas Emissions (GHG)	4.16	Tribal Cultural Resources (TCR)
4.8	Hazards and Hazardous Materials (HAZ)	4.17	Utilities and Service Systems (UTIL)
4.9	Hydrology and Water Quality (Hydro)	4.18	Wildfire (WILD)

Each subchapter is organized into the following sections:

- **Environmental Setting** offers a description of the existing environmental conditions, providing a baseline against which the impacts of the proposed project can be compared, and an overview of federal, State, regional, and local laws and regulations relevant to each environmental issue.
- **Standards of Significance** refer to the quantitative or qualitative standards, performance levels, or criteria used to evaluate the existing setting with and without the proposed project to determine whether the impact is significant. These thresholds are based primarily on the CEQA Guidelines, and also may reflect established health standards, ecological tolerance standards, public service capacity standards, or guidelines established by agencies or experts.
- **Impact Discussion** gives an overview of the potential impacts of the proposed project and explains why impacts are found to be significant or less than significant prior to mitigation. This subsection also includes a discussion of cumulative impacts related to the proposed project. Impacts and



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mitigation measures are numbered consecutively within each topical analysis and begin with an acronym or abbreviated reference to the impact section.

## STANDARDS OF SIGNIFICANCE

As stated above, significance criteria are identified before the impact discussion subsection, under the subsection, “Standards of Significance.” For each impact identified, a level of significance is determined using the following classifications:

- **No Impact.** A no impact conclusion describes circumstances where there is no adverse effect on the environment.
- **Less than Significant (LTS).** A less-than-significant impact includes effects that are noticeable, but do not exceed established or defined thresholds, or can be mitigated below such thresholds.
- **Significant (S).** A significant impact includes a description of the circumstances where an established or defined threshold would be exceeded. For each impact identified as being significant, the EIR identifies mitigation measures to reduce, eliminate, or avoid the adverse effect. If one or more mitigation measure(s) would reduce the impact to a less-than-significant level successfully, this is stated in the EIR.
- **Significant and Unavoidable (SU).** Significant and unavoidable impacts are described where mitigation measures would not diminish these effects to less-than-significant levels. The identification of a program-level significant and unavoidable impact does not preclude the finding of less-than-significant impacts for subsequent projects that comply with the applicable regulations and meet applicable thresholds of significance.

## EVALUATION METHODOLOGY

Under CEQA, the decision as to whether an environmental effect should be considered significant is reserved at the discretion of the City of San Carlos, acting as the lead agency, based on substantial evidence in the record as a whole, including views held by members of the public. An ironclad definition of “significant effect” is not always possible because the significance of an activity may vary based on the setting. The analysis in this Draft EIR is based on scientific and factual data that has been reviewed by the lead agency and represents the lead agency’s independent judgment and conclusions.<sup>1</sup> This section describes the methodology for the program-level evaluation in Chapters 4.1 through 4.18.

## 2045 GENERAL PLAN RESET HORIZON DEVELOPMENT POTENTIAL

As discussed in Chapter 3, *Project Description*, of this Draft EIR, the proposed project includes the proposed 2045 General Plan Reset. The environmental analysis in this EIR discusses the potential for

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<sup>1</sup> California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15064(b).

## ENVIRONMENTAL ANALYSIS

adverse impacts to occur from increasing the buildout potential in the EIR Study Area and implementing proposed amendments to General Plan goals, policies, and actions.

The 2045 horizon buildout potential under the proposed project includes growth associated with current and approved development projects, development of the sites in the City's 2023-2031 Housing Element Sites Inventory, development of ADUs and units under Senate Bill 9, estimated future housing development under future Regional Housing Needs Allocation cycles, and long-range planning initiatives, specifically the Downtown and Northeast Area Specific Plans, currently in progress. As shown in Table 3-1, *Proposed 2045 General Plan Reset Buildout Projections in the EIR Study Area*, in Chapter 3 of this Draft EIR, this combined projected new growth in the entire EIR Study Area for the 2045 horizon year includes 8,300 new housing units, 15,620 new residents, and 26,530 new employees by 2045.

Because the proposed project consists of a long-term policy document that is intended to guide future development activities and City actions, and because no specific development projects are proposed as part of the project, it is reasonable to assume that future development would occur incrementally or gradually over the approximately 20-year buildout horizon (i.e., 2024 to 2045). However, while this assumption describes the long-range nature of the proposed project, it does not prohibit or restrict when development can occur over the horizon period.

## EVALUATION OF THE GENERAL PLAN AND ITS HORIZON-YEAR PROJECTIONS

All of the analyses in this EIR are based on a consistent interpretation of the buildout projections included in Chapter 3, *Project Description*. However, the various analyses in this EIR require two different types of data inputs: some analyses require spatial inputs only and some require both quantitative and spatial inputs. In each case, the required analysis is determined by the standard of significance used for the impact discussion.

- Analyses that require a quantitative estimate of growth include vehicle trip generation, air pollution emissions, greenhouse gas emissions, noise generation, population growth, impacts on public services and utilities, and recreation. Impacts in these areas are generated by an increase in the number of people living and working in San Carlos, which generates consequent increases in vehicle miles traveled, noise, emissions, and use of services. Therefore, a reliable analysis depends on a reasonable, quantitative estimate of new population and employment. For these analyses, the horizon-year projection was considered “reasonably foreseeable” and was used in the analysis.
- Analyses that are based on spatial location only include aesthetics, biological resources, cultural resources, geology, hazards and safety, hydrology and water quality, land use, tribal cultural resources, and wildfire. These analyses must consider whether the proposed General Plan would allow *any* development in a geographic area, such as a very high fire hazard severity zone, which could create potential impacts. For these analyses, the question is not necessarily *how much* development the General Plan would allow, but *where* that development could potentially be located. Therefore, all future development in the EIR Study Area was evaluated to assess impacts in these topics.

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BASELINE

As discussed in Chapter 3, *Project Description*, of this Draft EIR, although most of the goals, policies, and actions of the existing General Plan are being carried forward into the proposed 2045 General Plan, this EIR does not evaluate the proposed project compared to the full potential buildout allowed by the existing General Plan, but rather evaluates the impacts of the proposed project compared to existing conditions, as required by CEQA Guidelines Section 15126.2. Generally, baseline represents the existing conditions on the ground (“physical conditions”). However, for quantitative analyses reliant on existing demographic or development data, a baseline year of 2024 is used, since this was the year the Notice of Preparation was published.

Baseline population, housing, and employment data from 2024 is shown in Table 4-1, *Existing Baseline Conditions*.

TABLE 4-1            EXISTING BASELINE CONDITIONS (2024)

Category	City Limits	Unincorporated	Total EIR Study Area
Households	12,000	760	12,760
Housing Units	12,460	790	13,250
Total Population	28,890	1,940	30,830
Jobs	20,410	370	20,780

Note: As described in Chapter 3, *Project Description*, of this Draft EIR, the EIR Study Area includes city limit and the Sphere of Influence. The EIR Study Area is shown on Figure 3-2, *EIR Study Area*.  
Source: PlaceWorks, 2024.

PRIORITY DEVELOPMENT AREAS AND TRANSIT PRIORITY AREAS

The Metropolitan Transportation Commission’s and Association of Bay Area Governments’ *Plan Bay Area 2050* is the San Francisco Bay Area’s Regional Transportation Plan/Sustainable Community Strategy. *Plan Bay Area 2050* is the long-range integrated transportation and land use/housing strategy through 2050 for the Bay Area, pursuant to Senate Bill (SB) 375, the Sustainable Communities and Climate Protection Act. *Plan Bay Area* lays out a development scenario for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas (GHG) emissions from transportation vehicle miles traveled (VMT) (excluding goods movement) beyond the per capita reduction targets identified by the California Air Resources Board. *Plan Bay Area 2050* extends the planning horizon and builds on the robust framework of *Plan Bay Area 2040*.

As part of its implementing framework, *Plan Bay Area* identifies Priority Development Areas (PDA) and Transit Priority Areas (TPA) as areas where concentrated development can have beneficial environmental effects and reduce adverse environmental impacts. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, *Plan Bay Area 2050* identifies the following PDA and TPA within the EIR Study Area:

- **Railroad Corridor PDA:** As shown in Figure 4-1, this PDA contains El Camino Real and land generally to the west of El Camino Real which includes portions of the downtown area of San Carlos. As shown



## ENVIRONMENTAL ANALYSIS

on Figure 4-1, this PDA shares a border with the Villages of Belmont Corridor PDA, just outside of the City.

- **TPA.** A TPA is defined as an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan. *Plan Bay Area* identifies El Camino Real as part of a transportation project (RTP ID: 21-T10-078) to implement Bus Rapid Transit improvements to existing bus service.<sup>2</sup> As shown in Figure 4-1, the TPA surrounds El Camino Real (SR-82), extending from the northwestern boundary of the City to the northeastern boundary.

### PRIORITY DEVELOPMENT AREAS

A PDA is a place that has convenient public transit service, often referred to as “transit-oriented,” that is prioritized by local governments, such as San Carlos, for housing, jobs, and services within existing communities. All PDAs are created and planned by local governments, which nominate eligible areas to the Association of Bay Area Governments for adoption. The PDAs identified throughout the Bay Area in *Plan Bay Area 2050* were projected to accommodate 72 percent (or 985,000 units) of new housing and 48 percent (or 679,000) of new jobs in the region from the 2015 baseline.<sup>3</sup> Development in PDAs leverage existing infrastructure and therefore can minimize development in green field (undeveloped) areas and maximize growth in transit-rich communities to help lower VMT and consequently reduce GHG emissions, air quality pollutants, and noise from vehicles with internal combustion engines dependent on fossil fuels. Additionally, due to the location, infill development in PDAs result in fewer impacts related to agricultural, forestry, mineral, archaeological, and biological resources, energy, geology and soils, hydrology and water quality, and wildfire. Impacts related to concentrated development in the PDAs are discussed throughout this Draft EIR, and specific quantified impacts are described in Chapter 4.2, *Air Quality*, Chapter 4.7, *Greenhouse Gas Emissions*, and Chapter 4.15, *Transportation*, of this Draft EIR.

Certain future residential or mixed-use residential projects and projects in PDAs that meet defined criteria in the CEQA Guidelines may be eligible for CEQA streamlining. For example, while not exclusive to PDAs, due to their urban setting, development in a PDA is more likely to qualify for a CEQA Guidelines Section 15332, *Infill Development Projects*, Class 32 Categorical Exemption.

<sup>2</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, 2023, *Plan Bay Area 2050 Transportation Project List*, <https://www.planbayarea.org/2050-plan/final-plan-bay-area-2050/final-supplemental-reports/interactive-transportation-project-list>, accessed May 30, 2023.

<sup>3</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed on August 29, 2024.

## ENVIRONMENTAL ANALYSIS

### TRANSIT PRIORITY AREAS

*Plan Bay Area 2050* also identifies TPAs, referred to as Transit-Rich PDAs.<sup>4</sup> These are areas within 0.5 miles of a major transit stop (i.e., a stop with service frequency of 15 minutes or less) that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon of a Transportation Improvement Program adopted pursuant to Section 450.216 or Section 450.322 of Title 23 of the Code of Federal Regulations. TPAs generally include existing neighborhoods served by transit and contain a wide range of housing options along with jobs, schools, and amenities. Certain future residential or mixed-use residential projects<sup>5</sup> in TPAs that meet defined criteria in the CEQA Guidelines may be eligible for CEQA streamlining.

With respect to future development in a TPA, SB 743, which became effective on January 1, 2014, amended CEQA by adding Public Resources Code Section 21099 regarding analysis of transportation, aesthetics, and parking impacts for urban infill projects, among other provisions.

SB 743 required the Governor's Office of Land Use and Climate Innovation (formerly the Office of Planning and Research) to identify new metrics for identifying and mitigating transportation impacts under CEQA, shifting from a congestion-based (level of service or LOS) standard to a VMT standard. Transportation impacts are discussed in Chapter 4.15, *Transportation*, of this Draft EIR.

With respect to aesthetics and parking, CEQA Section 21099(d)(1), states, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a TPA shall not be considered significant impacts on the environment." Accordingly, these topics are no longer to be considered in determining significant environmental effects for projects that meet all three of the following criteria:

- Is located on an infill site which is defined as "a lot located within an urban area that has been previously developed or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses."
- Is a residential, mixed-use residential, or an employment-center project.
- Is in a transit priority area, as defined above.

Accordingly, in compliance with SB 743, no significant aesthetic or parking impacts can be made in this environmental analysis for future development in the TPA. Aesthetic and parking impacts are not discussed further in this EIR with respect to future development in these designated TPAs. As appropriate, aesthetic impacts are considered for future development outside of these areas.

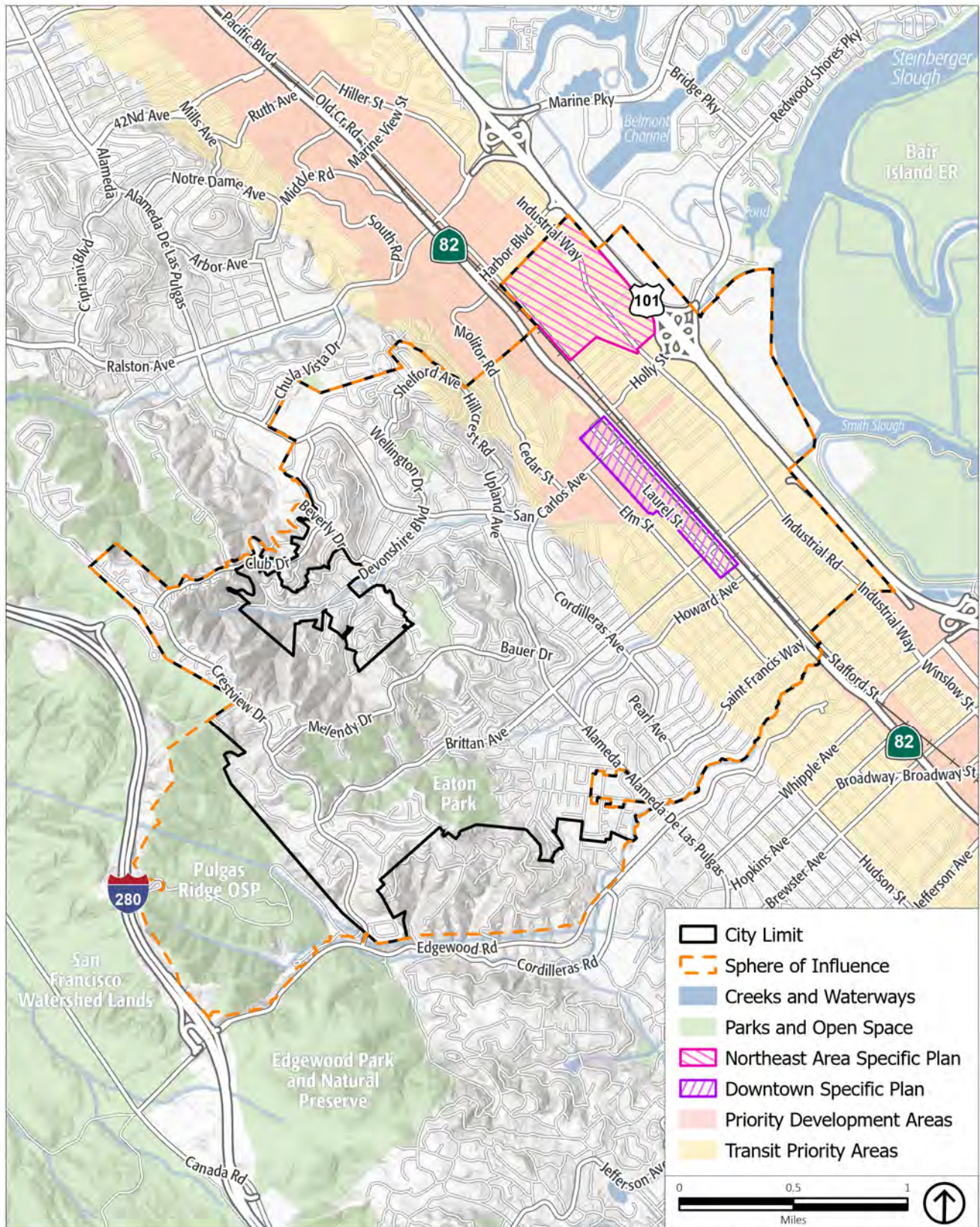
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<sup>4</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, *Plan Bay Area 2050: Regional Growth Framework Update – Overview of Existing and Updated Geographies*, [https://www.planbayarea.org/sites/default/files/pdfs\\_referenced/2019\\_Regional\\_Growth\\_Framework\\_Update\\_-\\_Whats\\_Changed\\_1.pdf](https://www.planbayarea.org/sites/default/files/pdfs_referenced/2019_Regional_Growth_Framework_Update_-_Whats_Changed_1.pdf), accessed August 29, 2024.

<sup>5</sup> A project in a transit priority area is referred to as a transit priority project sometimes referred to as a TPP development.



## ENVIRONMENTAL ANALYSIS



Source: Metropolitan Transportation Commission and the Association of Bay Area Governments, 2024; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4-1  
Priority Development Areas and Transit Priority Areas

## ENVIRONMENTAL ANALYSIS

### PARKING

Effective in 2010, parking inadequacy as a significant environmental impact was eliminated from the CEQA Guidelines by the Governor's Office of Land Use and Climate Innovation, which is the entity charged with drafting guidelines to help agencies implement CEQA. Accordingly, parking adequacy in the EIR Study Area is not discussed further in this EIR.

### POTENTIAL EFFECTS OF THE PROJECT ON THE ENVIRONMENT

The California Supreme Court concluded in the *California Building Industry Association vs. Bay Area Air Quality Management District* (CBIA vs. BAAQMD) case that "CEQA generally does not require an analysis of how existing environmental conditions will impact project's future users or residents." The CBIA vs. BAAQMD ruling provided for several exceptions to the general rule where an analysis of the project on the environment is warranted: 1) if the project would exacerbate existing environmental hazards (such as exposing hazardous waste that is currently buried); 2) if the project qualifies for certain specific specified exemptions (certain housing projects and transportation priority projects per Public Resource Code (PRC) 21159.21 (f),(h); 21159.22 (a),(b)(3); 21159.23 (a)(2)(A); 21159.24 (a)(1),(3); or 21155.1 (a)(4),(6)); 3) if the project is exposed to potential noise and safety impacts on projects due to proximity to an airport (per PRC 21096); and 4) school projects require specific assessment of certain environmental hazards (per PRC 21151.8). Therefore, the evaluation of the significance of project impacts under CEQA focuses on the potential impacts of the proposed project on the environment, including whether the proposed project may exacerbate any existing environmental hazards. Existing environmental hazards in San Carlos include, but are not limited to, seismic hazards, sea level rise, and wildfire. While the effects of these hazards on the proposed project are not subject to CEQA review following the *CBIA* case,<sup>6</sup> the City recognizes that seismic, wildfire, and flooding hazards from sea level rise are issues of local concern. Therefore, a discussion of the project's potential to exacerbate these hazardous conditions is provided in Chapter 4.6, *Geology and Soils*, Chapter 4.8, *Hazards and Hazardous Materials*, Chapter 4.9, *Hydrology and Water Quality*, and Chapter 4.18, *Wildfire*, of this Draft EIR.

### CUMULATIVE IMPACT ANALYSIS

A cumulative impact consists of an impact created as a result of the combination of the project evaluated in the EIR, together with other reasonably foreseeable projects causing related impacts. Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." Used in this context, cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. In the case of a long-range plan such as the General Plan, cumulative effects occur when future development under the long-range plan is combined with development in the surrounding areas, or in some instances, in the entire region.

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<sup>6</sup> *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369.



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Where the incremental effect of a project is not “cumulatively considerable,” a lead agency need not consider that effect significant but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. The CEQA Guidelines state that a lead agency has discretion to determine if a project’s contribution to a significant cumulative impact is cumulatively considerable.

The cumulative discussions in Chapters 4.1 through 4.18 of this Draft EIR explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing macro-scale air quality impacts, all development within the air basin contributes to regional emissions of criteria pollutants, and basin wide projections of emissions are the best tool for determining the cumulative impact. In assessing aesthetic impacts, on the other hand, only development within the local area of change would contribute to a cumulative visual effect since the area of change is only visible in its vicinity.

CEQA Guidelines Section 15130 permits two different methodologies for the cumulative impact analysis:

- The “list” approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the city.
- The “projections” approach allows the use of a summary of projections in an adopted plan or related planning document, such as a regional transportation plan, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

The cumulative impact analysis in this Draft EIR relies on a projections approach and takes into account growth from the proposed project within the EIR Study Area in combination with impacts from projected growth in the rest of San Mateo County and the surrounding region, as forecasted by *Plan Bay Area 2050*. The following provides a summary of the cumulative impact setting for each impact area:

- **Aesthetics:** The cumulative setting for visual impacts includes the growth within the EIR Study Area in combination with projected growth in the rest of San Mateo County and the surrounding region. The cumulative setting for visual impacts also includes future development during the buildout horizon of the proposed project, combined with effects of development on lands adjacent to the EIR Study Area
- **Air Quality:** Cumulative air quality impacts could occur from a combination of the proposed project with regional growth within the San Francisco Bay Area Air Basin.
- **Biological Resources:** The geographic scope of the cumulative analysis for biological resources considers the surrounding incorporated and unincorporated lands and the region.
- **Cultural Resources:** Cumulative impacts to cultural resources could occur from projected growth and intensified development in the surrounding region.
- **Energy:** Cumulative impacts to energy resources could occur if a series of actions lead to a wasteful, inefficient, or unnecessary consumption of energy resources or a conflict with or obstruction of a State or local plan for renewable energy and energy efficiency.
- **Geology and Soils:** The cumulative setting for this analysis includes growth within the EIR Study Area in combination with projected growth in the rest of San Mateo County and the surrounding region.

## ENVIRONMENTAL ANALYSIS

- **Greenhouse Gas Emissions:** The cumulative impact analyses for GHG emissions are related to the entire region. Because GHG emissions are not confined to a particular air basin but are dispersed worldwide, the cumulative impact analysis focuses on the global impacts and thus, is by its nature cumulative.
- **Hazards and Hazardous Materials:** The area considered for cumulative impacts is San Mateo County, which is the service area for the San Mateo County Environmental Health Services, the affected Certified Unified Program Agency.
- **Hydrology and Water Quality:** The geographic context used for the cumulative assessment of hydrology and water quality impacts, including the potential to exacerbate the potential for flooding, considers the watersheds that encompass San Carlos.
- **Land Use and Planning:** The geographic context for the cumulative land use and planning effects considers impacts from future development under the proposed project combined with impacts of development on lands adjacent to the city.
- **Noise:** Cumulative noise impacts are considered in the context of development that could occur with implementation of the proposed project and cumulative development within nearby areas of San Mateo County.
- **Parks and Recreation:** Cumulative impacts are considered in the context of the growth from the proposed project combined with the estimated growth from regional growth and their cumulative impacts regarding parks and recreation in the regional service area of the park and recreation providers in the EIR Study Area.
- **Population and Housing:** Impacts from cumulative growth are considered in the context of future development under the proposed project combined with development on lands adjacent to the city.
- **Public Services:** Cumulative impacts are considered in the context of projected growth from development under the proposed project within the city combined with the estimated growth in the service areas of each service provider.
- **Transportation:** The analysis of the proposed project addresses cumulative impacts to the transportation network in the context of the region.
- **Tribal Cultural Resources:** Cumulative impacts to tribal cultural resources could occur when a series of actions leads to adverse effects on local Native American tribes or tribal lands.
- **Utilities and Service Systems:** Cumulative impacts are considered in the context of the estimated growth in each utility's service area. Cumulative impacts to water, wastewater, solid waste, stormwater infrastructure, and energy infrastructure are individually analyzed.
- **Wildfire:** The analysis of the proposed project includes a discussion of how future development in the region may exacerbate wildfire risk in San Carlos and the surrounding area.

## 4.1 AESTHETICS

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to aesthetics, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.1.1 ENVIRONMENTAL SETTING

#### 4.1.1.1 REGULATORY FRAMEWORK

##### State Regulations

###### *California State Scenic Highways Program*

California's Scenic Highway Program was created by the State of California legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State laws governing the Scenic Highways Program are found in the Streets and Highways Code, Sections 260 through 263. The California Scenic Highway Program is maintained by the California Department of Transportation (Caltrans). Caltrans has not designated any highways within the EIR Study Area as a State Scenic Highway. However, to the west of the city limit, Interstate 280 (I-280) and State Route (SR) 35 are Caltrans-designated State Scenic Highways, and SR 92 is eligible for designation.<sup>1</sup>

###### *California Building Code*

The State of California provides a minimum standard for building design through Title 24, Part 2, of the California Code of Regulations, commonly referred to as the California Building Code (CBC). The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. The CBC includes standards for outdoor lighting that are intended to reduce light pollution and glare by regulating light power and brightness, shielding, and sensor controls.

The California Building Standards Commission adopted the California Green Building Standards Code, also known as CALGreen. As part of the CBC, CALGreen is in Part 11 of Title 24. CALGreen establishes building standards aimed at enhancing the design and construction of buildings using building concepts that reduce negative impacts and increase positive environmental impacts by encouraging sustainable construction practices. Specifically, Section 5.106.8, *Light Pollution Reduction*, establishes backlight,

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<sup>1</sup> California Department of Transportation, 2018, California State Scenic Highway System Map, <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>, accessed October 1, 2024.

## AESTHETICS

uplight, and glare ratings to minimize the effects of light pollution for nonresidential development. The local building permit process enforces the mandatory provisions of CALGreen. The City of San Carlos regularly adopts each new CALGreen update under the SCMC Chapter 15.04.125 Title 24, Part 11, *California Green Building Standards Code (CALGreen)*.

### *Senate Bill 743*

As described in Chapter 4, *Environmental Analysis*, of this Draft EIR, Senate Bill (SB) 743, which became effective on January 1, 2014, amended the California Environmental Quality Act (CEQA) by adding California Public Resources Code Section 21099 regarding analysis of aesthetics impacts for urban infill projects, among other provisions. CEQA Section 21099(d)(1), states, “Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area (TPA) shall not be considered significant impacts on the environment.”

Accordingly, these topics are no longer to be considered in determining significant environmental effects for projects that meet all three of the following criteria:

- Is located on an infill site which is defined as “a lot located within an urban area that has been previously developed or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.”
- Is a residential, mixed-use residential, or an employment-center project.
- Is in a transit priority area, which is defined as “an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or Section 450.322 of Title 23 of the Code of Federal Regulations.”

As described in further detail in Chapter 4, *Environmental Analysis*, and Chapter 4.10, *Land Use and Planning*, of this Draft EIR, the EIR Study Area includes the TPA located along El Camino Real and surrounding the Caltrain station in San Carlos. Accordingly, in compliance with SB 743, no significant aesthetic impact findings can be made in this environmental analysis for future development in the TPA.<sup>2</sup> Aesthetic impacts are not discussed further in this EIR with respect to future development in the TPA. As appropriate, aesthetic impacts are only considered for future development outside of these areas.

## Local Regulations

### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and

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<sup>2</sup> Metropolitan Transportation Commission, 2021, Transit Priority Areas, <https://www.arcgis.com/apps/mapviewer/index.html?layers=370de9dc4d65402d992a769bf6ac8ef5>, accessed September 24, 2024.



assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.1.3, *Impact Discussion*.

### *City of San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to aesthetics as follows:

- Chapter 12.08, *Grading and Excavations*, establishes standards and specifications for site planning activities to protect soil and water quality and maintain the city's natural topography, soils and vegetative features during development.
- Title 15, *Buildings and Construction*, is the primary document that regulates the building and construction requirements in San Carlos. It is based on the California Building Code but has been modified to include provisions applicable only to San Carlos.
- Title 17, *Subdivisions*, implements the California Subdivision Map Act and the City General Plan and Specific Plans, as they relate to the subdivision of land. Its provisions ensure the orderly development of lands in the incorporated city. The ordinance also provides standards for surveying, design, and construction and installation of relevant infrastructure.
- Title 18, *Zoning Code*, divides the city into distinct zones in order to implement the land use and development policies in the General Plan. Among the primary objectives of the Zoning Code are the regulation of building form, placement, density, and the provision of sufficient parking and open spaces in conjunction with development.
  - Section 18.15.070, *Lighting and illumination*, includes standards that apply to all new development and additions that expand existing floor area by ten percent or more. This chapter regulates the use of lighting for multiple-unit residential buildings, nonresidential buildings, and pedestrian-oriented lighting.
  - Chapter 18.29, *Design Review and Objective Design Standards Compliance Review*, establishes the design review and compliance review procedures to ensure that new development supports the General Plan's goal of creating a vibrant pedestrian- and transit-oriented core and distinctive neighborhoods and districts with a diversity of building types that provide continuity in scale and character with appropriate transitions.

### *Objective Design Standards for Single-Family Development Projects*

In November 2023, Ordinance 1603 was adopted that made amendments to the certain section in SCMC Chapter 18, *Zoning*. Establishing objective design standards for residential development is essential to ensure orderly and streamlined development, comply with state law requirements, and to meet the 2023-2031 Regional Housing Needs Allocation.<sup>3</sup>

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<sup>3</sup> City of San Carlos, 2023, City Council Staff Report, <https://cityofsancarlos.primegov.com/Portal/Meeting?meetingTemplateId=13065>, accessed on October 1, 2024.

## AESTHETICS

### *East Side Innovation District Vision Plan*

Approved in 2021, the East Side Innovation District Vision Plan sets forth clear goals and principles written to achieve the desired character for this area of the City. The East Side Innovation District applies to the area east of El Camino Real and west of US Highway 101 and is bounded by Brittan Avenue to the south and Holly Street to the north. Principles of the Vision Plan related to aesthetics include principles coordinating signage, banners, lighting, streetscape elements, and public art to illustrate the legacy of the East Side Innovation District.

### 4.1.1.2 EXISTING CONDITIONS

#### Visual Character

San Carlos is comprised of a number of neighborhoods, districts, and open spaces. The visual character is typical of surrounding cities and contains several aesthetic resources such as scenic vistas from the hills in the western portions of the city, cohesive residential neighborhoods, and a vibrant, pedestrian-scale downtown. Existing neighborhoods are predominantly residential, while districts contain a mixture of residential, commercial, and industrial uses.

#### *Downtown and Historic Downtown Core Area*

Downtown is defined as Laurel Street from Holly Street to Greenwood Avenue including properties north to El Camino Real and west to Walnut Street. The historic Downtown Core Area is centered at the 1100 and 1200 blocks of San Carlos Avenue and the 600, 700, and 800 blocks of Laurel Street. Laurel Street is a pleasant pedestrian environment with a grid street pattern, pedestrian amenities, and landscaping. Frank D. Harrington Park is centrally located in the Downtown area and offers people a place to gather and visit. The street width supports a pedestrian environment and is in scale with the surrounding buildings. The alley between Laurel Street and El Camino Real minimizes curb cuts along Laurel Street and allows service vehicles to access businesses from the rear of the buildings. Buildings of varying heights, typically one to two stories, with traditional storefronts are generally built to the sidewalk and address the street. Downtown serves as a character-defining resource for San Carlos.

#### *Laurel Street (South of Arroyo Street)*

Laurel Street, south of Arroyo Street to Eaton Avenue, differs from Downtown. Although the buildings are of similar height, one to two stories, storefronts along this portion of Laurel Street are broken up by mixed-use residential and residential buildings. Storefronts are mostly active along the street with the presence of ground floor retail; however, the residential units interspersed along the street interrupt the continuity of these active uses. As in the Downtown portion of Laurel Street, an almost continuous alley between Laurel Street and El Camino Real reduces curb cuts along Laurel Street and provides access for service vehicles at the rear of buildings.

Development on the east side of Laurel Street, between Belmont Avenue and White Oak Way, is oriented towards El Camino Real. Key building facades fronting Laurel Street have no windows or entrances which creates a block of blank walls with no windows or doorways.

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South Laurel Street has limited spaces to gather and has no public open space such as a plaza or pocket park. Trees and landscaping are intermittent along this portion of the street. The corridor has few curb cuts and a relatively narrow street which helps create a pedestrian environment.

This area includes many important community uses, business support services, personal support services, and convenience uses. Uses include a grocery store, retail, restaurants, and offices as well as multi-family residential uses. During 2023, the 700 block of Laurel Street was permanently closed to cars and turned into a pedestrian mall. This area's streets are currently being redesigned and will be reviewed during the Downtown Specific Plan and Streetscape Master Plan planning processes.

### *El Camino Real*

The El Camino Real corridor is a linear commercial area with a diverse range of uses including auto-related businesses, lodging, restaurants and miscellaneous small businesses. Although it is a regional transit corridor serving the Peninsula, El Camino Real is largely automobile-oriented. The visual quality of the area is dominated by automobiles and contains diverse businesses, including restaurants, service shops, small offices, and other businesses. The train tracks also run parallel to El Camino and much of the land between the tracks and the road is developed with multi-family housing and surface parking for the train station. The grade-separated railroad tracks present an elevated visual barrier that obstructs views to the east from El Camino Real.

### *East Side Area*

The East Side area includes 600 acres of land in the eastern portion of the city. The area is defined by the city limit to the north, east and south, and the railroad tracks to the west. The East Side area is bisected by US Highway 101. Initially, this area was the site of small industrial firms including manufacturing, repairing, building supply uses, service businesses, and housing which arose after World War II. Since the 1990s, the uses in the East Side area have transitioned and new non-residential uses including research and development space, computer hardware and software, telecommunications, and life sciences, reflecting San Carlos' location in the northern portion of Silicon Valley. The area also includes shopping centers with large format retail stores. Subareas of the East Side area include the Northeast Area, East Side Innovation District, the Industrial Arts Neighborhood, and the Harbor Industrial Area.

The East Side area also contains San Carlos Airport, located east of US Highway 101, along the Bay shoreline. Private planes are the primary users of the airport and are utilized for both business and recreation.

There are two residential neighborhoods in the East Side area, between Old County Road and Industrial Road, both north and south of Holly Street. The neighborhoods are predominantly comprised of one- or two-story single-family homes set back from the narrow residential streets. These neighborhoods have abundant street trees and a strong sense of neighborhood. Laureola Park is a major focal point of one of the residential neighborhoods.

## AESTHETICS

### *Residential Neighborhoods West of El Camino Real*

The character of residential neighborhoods in San Carlos is diverse. Adjacent to Downtown and Laurel Street are older residential areas with traditional grid street patterns, higher densities, historic homes and a mixture of housing types. Relatively old and established street trees, pre-World War II buildings and attractive streetscapes create the visual character in this neighborhood.

Residential areas on the south end of the city (adjacent to Redwood City) are characterized by one- and two-story single-family homes with tree-lined streets. Homes are set back from an elongated, suburban street grid pattern and are a mix of one- and two-story homes.

The western portions of San Carlos, west of Alameda de las Pulgas, contain residential neighborhoods that are integrated into picturesque and often dramatic hillside terrain. In these areas, streets follow the contours of the hills, with many multi-story hillside homes appearing as single-story residences from the street. The far western portion of the city, near Brittan and Crestview Avenues, features single-family homes and condominiums with commanding views of the San Francisco Bay and the East Bay. Much of the development of this far western portion of the city occurred by clustering home sites and including large areas of private open space which add to its rural character.

### *Devonshire Canyon*

Located in the western part of the city, Devonshire Canyon is unincorporated land under the jurisdiction of San Mateo County, surrounded on all sides by San Carlos. Devonshire Canyon is characterized by single-family homes located within exceptionally scenic hilly terrain. Most houses are located in flatter canyon floor areas, with the steeper areas largely but not completely undeveloped. Roads in Devonshire Canyon are extremely narrow and winding, and generally do not have sidewalks. Upper branches of Pulgas Creek are also located in this area and provide scenic riparian corridors.

## Open Space

Open space areas provide important aesthetic value both from a distance and from adjacent areas. These visual qualities include trees, grasslands and open space. These areas also contain many scenic vistas overlooking San Carlos and surrounding communities. The EIR Study Area also includes larger open space areas, such as Eaton Park, Big Canyon Park, and Pulgas Ridge Open Space Preserve.

## Scenic Vistas

San Carlos has varied topography that ranges from land at sea level to the hilly western portion of the city with elevations up to 900 feet. The hillsides and ridgelines in the EIR Study Area provide an array of scenic resources and afford numerous vantage points from which scenic vistas can be enjoyed. Views of the surrounding open space and San Francisco Bay can be accessed in many areas west of Alameda de las Pulgas, including from City parks, open space areas, and existing residential neighborhoods.

## Scenic Highways

Scenic roads and corridors are an aesthetic resource for San Carlos and the surrounding communities. There are three types of scenic roads near or in San Carlos: State scenic highways, County scenic highways, and City scenic roads.

There is one State scenic highway near the EIR Study Area. While the City of San Carlos is not visible from this scenic highway, portions of the SOI are visible from it.

- **Interstate 280.** This freeway is the most well-known scenic road near San Carlos with sweeping views of the Bayside and San Francisco watersheds.

There are two County-designated scenic highways located near the EIR Study Area:

- **Edgewood Road.** This road is a County scenic highway. It is rural in nature and used frequently by bicyclists.
- **Cañada Road.** This road is also a County scenic highway. It is also rural and used by bicyclists.

There are seven City-designated scenic roads in San Carlos, which are identified in the Circulation and Scenic Highways Element of the existing General Plan:

- **Alameda de las Pulgas.** This road runs through quiet residential areas of the city from north to south. Special landscape treatments have been implemented at points along the road to enhance the corridor.
- **San Carlos Avenue.** This avenue goes from the scenic hillside areas in the west-ern portion of the city to the heart of downtown. Special landscape treatments have been implemented at points along the route to enhance the corridor.
- **Brittan Avenue.** This avenue traverses scenic open space and residential areas in the western portion of the city, crosses the city and continues all the way to US Highway 101.
- **Club Drive.** This street crosses through open space areas and residential neighborhoods in the western portion of the city and provides scenic vistas.
- **Crestview Drive.** This street runs along the ridges of the western portion of the city providing dramatic views to the east.
- **El Camino Real.** This road is historically significant and is visually important as it carries large amounts of traffic. There are not scenic vistas from El Camino Re-al within the city.
- **Holly Street.** This arterial street extends east to west from US Highway 101 to Elm Street. It is a primary entry and access to San Carlos and improvements have included entryway decorative features, a grade separation and landscaping.

## Light and Glare

Light pollution includes all forms of unwanted light in the night sky, including glare, light trespass, sky glow and over-lighting. Views of the night sky are an important part of the natural environment and

## AESTHETICS

excessive light and glare can be visually disruptive to people and nocturnal animal species. The EIR Study Area may be adversely affected not only by light pollution from development within San Carlos, but also from sky glow associated with the development of surrounding cities.

### 4.1.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant aesthetic impact if it would:

- AES-1 Have a substantial adverse effect on a scenic vista.
- AES-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.
- AES-3 In nonurbanized areas, 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.
- AES-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
- AES-5 In combination with past, present, and reasonably foreseeable projects, result in cumulative aesthetics impacts in the area.

With respect to AES-3, PRC (CEQA) Section 21071, *Urbanized Area Definition*, has several metrics by which a city can be defined as an urban area. CEQA Section 21071(a) states that a city can be classified as an urban area based on different characteristics depending on whether its population is more or less than 100,000 persons. If the city has a population of less than 100,000 persons, as is the case in San Carlos, the city may be considered urbanized if it and not more than two contiguous incorporated cities combined equals at least 100,000 persons. As shown in Table 3-1, *Proposed 2045 General Plan Reset Buildout Projections In The EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR, San Carlos has a population of approximately 28,890 as of 2024 and, according to the State of California Department of Finance, in 2024 the population of Redwood City was 81,863 (for a combined total population of 110,753). Therefore, San Carlos is considered an urban area under CEQA Guidelines Section 21071, and impact discussion AES-3 addresses the second part of the question and evaluates whether the project would conflict with applicable zoning and other regulations governing scenic quality.

### 4.1.3 IMPACT DISCUSSION

As described under subheading “Senate Bill 743” in Section 4.1.1.1, *Regulatory Framework*, in Chapter 4, *Environmental Analysis*, of this Draft EIR, future development in the TPA along El Camino Real and the Caltrain station in San Carlos would be exempt from aesthetics evaluation. As discussed in Chapter 3, *Project Description*, of this Draft EIR, the majority of new housing in San Carlos is expected on infill parcels near Downtown, along the El Camino Real corridor, along Old County Road between Holly Street and Terminal Avenue, and along East San Carlos Avenue. Most of the commercial growth is expected to occur in the Downtown area and most of the office growth is expected in the Downtown and Northeast areas. Research and development and industrial growth would be limited to the east side area of San

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Carlos. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4 of this Draft EIR, much of the potential new housing, commercial, and office growth under the proposed project would be in the TPA and are exempt from aesthetics evaluation. Accordingly, aesthetic impacts are only considered for future development outside of the TPA.

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<b>AES-1</b>	<b>The proposed project would not have a substantial adverse effect on a scenic vista.</b>
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Future development within the buildout horizon of the proposed project would have the potential to affect scenic vistas and/or scenic corridors if new or intensified development blocked views of areas that provide or contribute to such visual resources. Potential effects could include blocking views of the San Francisco Bay and ridge of hills along the western border of the city from publicly accessible vantage points or the alteration of the overall scenic vista or I-280 corridor itself. Such alterations could be positive or negative, depending on the characteristics of individual future developments and the subjective perception of observers.

Future development outside of the TPA may offer or be part of intermittent or views of the Bay and hills. Due to the built-out nature of San Carlos and the land use map in the General Plan, future development outside of the TPA would be concentrated in existing urban areas and in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, where future development would have a lesser impact on scenic vistas.

The Land Use (LU) Element and Circulation & Scenic Highways (CSH) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to aesthetics, including scenic vistas. The following General Plan goals, policies, and actions would serve to minimize potential adverse impacts related to scenic vistas:

- **Goal LU-1:** Ensure a sustainable land use pattern.
  - **Policy LU-1.10:** Require that development within the Pulgas, Brittan and Cordilleras Creek watersheds shall preserve watershed integrity, including natural vegetation, soil and slope stability, water quality, scenic values, and potential archaeological resources.
- **Goal LU-8:** Ensure excellence in all development design.
  - **Policy LU-8.2:** Ensure that new development sensitively transitions to the character of adjacent structures and the immediate neighborhood.
  - **Policy LU-8.4:** Promote pedestrian-scaled design through site planning, building design, finish details and landscaping for all types of development by requiring height and locational transitions between buildings of varied levels that are sensitive to the interrelationships of surrounding uses and structures, especially residential.
  - **Policy LU-8.11:** Discourage abrupt changes in building scale. A gradual transition between low-rise to mid-rise buildings should be achieved by using the low-rise buildings at the edge of the project site. Consider the relationship of buildings to the street, to one another and to adjacent structures and land uses, especially single-family residential.

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- **Policy LU-8.19:** Residential and mixed-use structures shall be designed to be compatible with existing structures in the vicinity, minimize obstructing views from adjacent structures or views of community importance, minimize interference with the right or ability to use solar energy and be consistent with the Objective Design Standards.
- **Goal LU-9:** Protect and enhance all residential neighborhoods.
  - **Policy LU-9.5:** Require buffering, screening, setbacks, or other measures for new and expanded multi-family residential and/or commercial/industrial developments adjacent to single-family residential neighborhoods to minimize impacts and compatibility conflicts.
  - **Policy LU-9.9:** Encourage the design of development to minimize the obstruction of significant views of the San Francisco Bay, the western hills, or other significant natural vistas to the greatest extent possible.
- **Goal LU-10:** Minimize the impacts of development in hillside areas.
  - **Policy LU-10.2:** Require development in hillside areas to be designed into the natural features of the hillside including topography, trees, vegetation, landforms and drainage channels.
  - **Policy LU-10.3:** In hillside areas, encourage houses to be oriented to the natural topography of the site.
  - **Policy LU-10.4:** Design and locate roads, utilities and other infrastructure to reasonably minimize impacts on the hillside environment. Design should respect the natural topography, produce the least visual impact and require the least grading while remaining consistent with public health and safety standards.
- **Goal CSH-8:** To develop a system of scenic highways and roads that reflects the aesthetic and visual qualities of the existing and developing San Carlos landscape and the surrounding region.
  - **Policy CSH-8.1:** The City shall continue its program of protecting and enhancing local scenic roads through right-of-way protection and appropriate architectural and landscape controls and requirements.
  - **Policy CSH-8.2:** The City shall encourage the planting of native trees and shrubs along local scenic roads, where practical.
  - **Policy CSH-8.3:** The City shall maintain local scenic roads in safe condition.
  - **Policy CSH-8.4:** The City shall continue architectural and site plan review of all signage, structures and site developments proposed in the scenic corridors to ensure appropriateness of design and materials and proper placement of structures and vegetative screening where necessary.
  - **Policy CSH-8.5:** Traffic mitigation funds should be available to provide aesthetic enhancement to the city's Scenic Highways and Roads.

All future development that is subject to discretionary approval within the city limit would be required to comply with SCMC regulations as described in Section 4.1.1.1, *Regulatory Framework*. The City has also adopted Objective Design Standards for Single-Family Development Projects to ensure the design of new buildings and additions are compatible with their surroundings. Furthermore, future development in the



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city would be subject to the various planning documents that govern scenic quality in the city, as described in Section 4.1.1.1, *Regulatory Framework*.

Any future development in the SOI would be required to comply with the San Mateo County General Plan and San Mateo County Zoning Ordinance. Zoning designations in the SOI include Residential Estates, One Family Residential, and Resource Management districts. Development in the Resource Management District would be required to adhere to San Mateo County Zoning Ordinance Section 6324.2, Site Design Criteria, to ensure compatibility with existing character and visual quality. Development on parcels currently in the SOI would not occur under the proposed project unless and until such parcels are annexed to the City of San Carlos.

Compliance with the existing development requirements described above, along with implementation of the General Plan goals, policies, and actions, would ensure any impacts to scenic vistas and/or corridors would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>AES-2</b>	<b>The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.</b>
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As described in Section 4.1.1.1, *Regulatory Framework*, there are no State-designated scenic highways within the EIR Study Area. However, I-280 is a State-designated scenic highway and parts of the SOI are visible heading northbound. Future development in the unincorporated County that would affect I-280 views would be subject to the regulations of San Mateo County, including those in the San Mateo County General Plan and San Mateo County Zoning Ordinance, until the land is annexed to the City. Upon annexation, parcels in the SOI near I-280 would be near Crestview Drive and a scenic corridor could be created and would be subject to General Plan Policy CSH-8.4, listed in impact discussion AES-1, which requires architectural and site review of development within scenic corridors. Therefore, implementation of the proposed project would not damage existing scenic resources within a State scenic highway and a *less-than-significant* impact would occur.

**Significance without Mitigation:** Less than significant.

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<b>AES-3</b>	<b>The proposed project would not conflict with applicable zoning and other regulations governing scenic quality.</b>
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The proposed 2045 General Plan Reset is the primary planning document for the City of San Carlos. The proposed project is intended to ensure consistency between the General Plan, Zoning Ordinance, and State law and with the updated buildout projections. Therefore, there would be no impact with respect to these documents being inconsistent with policies or regulations governing scenic quality.

As described in impact discussion AES-1, all future development that is subject to discretionary approval within the city limit would be required to comply with SCMC regulations and the Objective Design

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Standards for Single-Family Development Projects, as well as the East Side Innovation District Vision Plan. Future development in the SOI would be subject to the regulations of the San Mateo County General Plan and San Mateo County Zoning Ordinance until annexation to the City.

In addition to the policies listed in impact discussion AES-1, the Land Use (LU) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to aesthetics, including scenic quality. The following General Plan goals, policies, and actions would serve to minimize potential adverse impacts on scenic quality:

- **Goal LU-7:** Promote the community character of San Carlos, including the unique village character of Downtown.
  - **Policy LU-7.4:** Respect the visual prominence of important city landmarks, gateways and destinations.
- **Goal LU-8:** Ensure excellence in all development design.
  - **Policy LU-8.1:** Require all development to feature high quality design that enhances the visual character of San Carlos.
  - **Policy LU-8.3:** Encourage design features and amenities in new development and redevelopment, including, but not limited to:
    - Interconnected street layout.
    - Clustering of buildings.
    - Landscaping on each lot.
    - Visual buffers.
    - Facilitation of pedestrian activity.
    - Distinctiveness and variety in architectural design.
  - **Policy LU-8.4:** Promote pedestrian-scaled design through site planning, building design, finish details and landscaping for all types of development by requiring height and locational transitions between buildings of varied levels that are sensitive to the interrelationships of surrounding uses and structures, especially residential.
  - **Policy LU-8.5:** Optimize architectural quality by encouraging the use of quality materials, particularly as accents and authentic detailing, such as balconies and window trims.
  - **Policy LU-8.6:** Encourage new commercial development to provide outdoor areas and landscaping and tree canopy to enhance the surroundings.
  - **Policy LU-8.7:** Require new residential development to provide outdoor areas and landscaping or native vegetation, or tree canopy to enhance the surroundings.
  - **Policy LU-8.8:** Encourage design of convenient pedestrian walkways with shade and minimal tripping hazards, preferably with landscape buffers between roadways and walkways.
  - **Policy LU-8.9:** Encourage the design of attractive outdoor pedestrian spaces that encourage impromptu public gathering places with features such as plazas, interior walkways and paseos, ornamental gates, trellises, lighting, trees and landscaping, seating and fountains.

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- **Policy LU-8.10:** On all sides of buildings, require the incorporation of quality architectural design elements for all building façades and stepping back upper floors in order to reduce bulk and mass and to break up monotonous wall lines.
- **Policy LU-8.13:** Require parking areas associated with development to be located and designed to minimize visual impact to the greatest extent feasible. This may include locating parking behind buildings street frontage, below grade, or screening through the use of natural landscaping.
- **Policy LU-8.16:** Require high quality signage through design, use of materials and colors compatible with and complementary to the architectural character of the building(s) and surroundings.
- **Policy LU-8.17:** Require telecommunications and utility facilities to be sensitively placed, shielded, screened or lessened from view to the greatest extent possible through design review.
- **Policy LU-8.20:** Require all new residential multi-family residential, commercial and industrial projects subject to design review by the appropriate decision-making body for compliance with site planning, architecture, signing and landscaping criteria prior to approval, as permitted by State law.
- **Action LU-8.2:** Review and amend existing residential design guidelines and create commercial design guidelines as needed.
- **Action LU-8.4:** Develop objective design standards consistent with State law and amend the Zoning Ordinance and create a Planning Division application submittal checklist to require information and materials that accurately and sufficiently demonstrate a project's compliance with new objective design standards.
- **Goal LU-11:** Provide for attractive and functional gateways.
  - **Policy LU-11.1:** Require high quality design for buildings at visually significant locations in gateway areas.
  - **Policy LU-11.2:** Encourage design features, such as landscaping, art and displays in gateway areas that are welcoming, attractive and contribute to a unique sense of place.
  - **Policy LU-11.3:** Encourage distinctive architectural features, such as tower elements or a plaza at building entry, for buildings located at visually significant locations within gateway areas.
  - **Policy LU-11.5:** Limit the visibility of surface parking within gateway areas through landscaping and architectural treatments such as low decorative walls or trellises.
  - **Policy LU-11.6:** Discourage the use of sound walls within gateway areas. If sound walls cannot be avoided, ensure that sound walls are designed to be attractive and well landscaped.
  - **Policy LU-11.9:** Ensure that new development on the Landmark sites at the northeast and southeast corners of Holly Street and Industrial Road function as the primary gateway features for the Holly Street Gateway area. Site planning, building treatments, pedestrian improvements and landscape features shall exhibit exceptional design and respect integrity of adjacent uses including nearby residential properties.

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- **Action LU-11.1:** Develop design guidelines for development and improvements within gateway areas to enhance community character. These guidelines should promote architectural styles, land- scape, street furniture, public art and signage that are in keeping with the aesthetic values of San Carlos.

While development resulting from implementation of the proposed project could potentially impact scenic quality in the EIR Study Area, development projects would be required to adhere to these regulations, along with the General Plan goals, policies, and actions in the proposed project. Therefore, implementation of the proposed project would not conflict with applicable zoning or other regulations governing scenic quality and the impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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AES-4	The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
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Nighttime illumination and glare impacts are the effects of a development's exterior lighting on adjoining uses and areas. Nighttime uses associated with future development may increase light intensity levels and may have the potential to affect existing and future nearby sensitive receptors. If lighting in new development is not designed to reduce upwardly directed light, nighttime lighting could obscure views of the night sky or intrude into neighboring properties. Future development would also incrementally increase glare due to the new building surfaces, parked cars, and solar panels if exterior glazing (i.e., windows and doors) and site planning (i.e., landscaping and solar panel placement) are not carefully considered. Light and glare impacts are determined through a comparison of the existing light sources with the lighting plans or policies incorporated in development proposals.

As discussed, future development within the TPA is exempt from aesthetics evaluation pursuant to SB 743. Due to the built-out nature of the EIR Study Area, future development outside of the TPA would occur in existing urban areas and would occur in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, where future development would have a lesser light and glare impact.

Currently, the EIR Study Area contains many existing sources of nighttime illumination. These include street and parking area lights, building-mounted lights, illuminated signage, security lighting, and interior and exterior lighting on existing residential, commercial, and institutional buildings. Glare is primarily from building materials and parked cars. Additional on-site light and glare is caused by surrounding land uses and vehicular traffic on US Highway 101, I-280, and SR-82.

Future development and activities within the buildout horizon of the proposed project could intensify lighting sources throughout the EIR Study Area. Future lighting would involve uses similar to the existing downtown, urban, and suburban uses in the EIR Study Area and sources of light and glare associated with these uses would be similar in intensity and nature to the existing source of light and glare. In

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addition to new lighting for buildings, security, and parking areas, buildout of the EIR Study Area would also include lighting that would illuminate future development locations.

As described in Section 4.1.1.1, *Regulatory Framework*, in addition to general best management practices that require lighting that is context sensitive in style and intensity required under CALGreen, future development within the city limit, including the installation of solar panels, would also have to comply with the City's lighting standards as outlined in the SCMC. Future development in the SOI would be subject to the regulations of the San Mateo County General Plan and San Mateo County Zoning Ordinance. Future development would also be reviewed for consistency with the lighting standards regarding the appropriate use of lighting and avoidance of glare from lighting and other sources.

Furthermore, the proposed Land Use (LU) Element, Environmental Management (EM) Element, and Community Safety & Services (CSS) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts related to aesthetics, including light and glare. The following General Plan policies and actions would serve to minimize potential adverse impacts as a result of new sources of light and glare:

- **Goal LU-1:** Ensure a sustainable land use pattern.
  - **Action LU-1.5:** Consider adoption of a lighting ordinance that restricts the type, intensity and placement of outdoor lighting fixtures in development. New lighting should illuminate properties appropriately and help keep them safe and secure, but shall not cause glare or spillover into surrounding properties or negatively affect the night sky.
- **Goal LU-8:** Ensure excellence in all development design.
  - **Action LU-8.5:** Research and consider the adoption of a new outdoor lighting ordinance. A lighting ordinance would restrict the type, intensity and placement of outdoor lighting fixtures of development. A lighting ordinance would permit appropriate illumination, improve security, would limit glare or spillover into surrounding properties and would protect the night sky.
- **Goal EM-1:** Protect natural habitat and other biological resources.
  - **Policy EM-1.4:** Protect and preserve the circadian cycle (the cycle of night and day) by limiting sources of light during nighttime hours.
- **Goal CSS-4:** Protect the community from the harmful effects of hazardous materials.
  - **Policy CSS-4.6:** Prohibit land uses and development which emit odors, particulates, light glare, or other environmentally sensitive contaminants from being located within proximity of schools, community centers, senior homes and other sensitive receptors. Sensitive receptors shall be prohibited from locating in the proximity of environmentally sensitive contaminants.

Compliance with these standards to reduce light spill and glare, combined with the General Plan goals, policies, and actions listed above, would ensure future development does not generate excessive light levels or glare. Therefore, the lighting and glare from implementation of the proposed project would not substantially increase nighttime light or glare within the EIR Study Area or its surroundings and impacts would be *less than significant*.

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**Significance without Mitigation:** Less than significant.

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AES-5	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative aesthetics impacts in the area.
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As discussed in Chapter 4, *Environmental Analysis*, of this Draft EIR, the cumulative setting includes growth within the EIR Study Area in combination with projected growth in the rest of San Mateo County and the surrounding region. The cumulative setting for visual impacts includes future development within the buildout horizon of the proposed project, combined with effects of development on lands adjacent to the EIR Study Area.

Compliance with the SCMC regulations and Objective Design Standards, along with implementation of the General Plan goals, policies, and actions, would ensure any impacts to scenic vistas and/or corridors would be less-than-significant. While there are no officially designated State scenic highways within the EIR Study Area, portions of the SOI are visible from State scenic highway I-280 and future development would be subject to the regulations contained in the San Mateo County General Plan and San Mateo County Zoning Ordinance to avoid damage to scenic resources within State scenic highways. The proposed project is intended to ensure consistency between the General Plan, Zoning Ordinance, and State law; therefore, implementation of the proposed project would not conflict with applicable zoning or other regulations governing scenic quality. Light and glare from future development under the proposed project would be regulated through the City's lighting standards in the SCMC, the Objective Design Standards, and other adopted plans, as well as implementation of the General Plan goals, policies, and actions.

With adherence to existing local and regional regulations, future development under the proposed project would not create substantial impacts to visual resources in San Carlos or the surrounding communities. Therefore, the proposed project would not result in a cumulatively considerable impact to aesthetic resources and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## 4.2 AIR QUALITY

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to air quality, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project. Greenhouse gas (GHG) emissions impacts are addressed in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR.

The evaluation in this chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for plan-level analysis. The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. In this chapter “emissions” refers to the actual quantity of pollutant, measured in pounds per day (lbs/day) and “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 ( $\mu\text{g}/\text{m}^3$ ).

The analysis in this chapter is based on the buildout projections for the proposed project. The projected buildout is modeled using the California Air Resources Board’s (CARB) 2021 Emissions Factor Model (EMFAC2021), the Off-Road Emissions Factor Model (OFFROAD2021), natural gas use provided by Pacific Gas and Electric (PG&E), electricity use provided by PG&E and Peninsula Clean Energy (PCE), and trip generation and vehicle miles traveled (VMT) provided by Kittelson and Associates. Trip generation is provided in Appendix C, *Noise Data*, and VMT calculations are in Chapter 4.15, *Transportation*, of this Draft EIR. The criteria air pollutant emissions modeling is included in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

### 4.2.1 ENVIRONMENTAL SETTING

#### 4.2.1.1 CRITERIA AIR POLLUTANTS

Pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law under the federal Clean Air Act (“National”) and California Clean Air Act, respectively. 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 a specific source; secondary air pollutants occur through chemical reactions. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides ( $\text{NO}_x$ ), sulfur dioxide ( $\text{SO}_2$ ), coarse inhalable particulate matter ( $\text{PM}_{10}$ ), fine inhalable particulate matter ( $\text{PM}_{2.5}$ ), and lead (Pb) are primary air pollutants. Of these, CO,  $\text{SO}_2$ ,  $\text{NO}_2$ ,  $\text{PM}_{10}$ , and  $\text{PM}_{2.5}$  are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. ROG and  $\text{NO}_x$  are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone ( $\text{O}_3$ ) and nitrogen dioxide ( $\text{NO}_2$ ) are the principal secondary pollutants.

Table 4.2-1, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

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**TABLE 4.2-1 CRITERIA AIR POLLUTANT HEALTH EFFECTS SUMMARY**

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	Chest pain in heart patients Headaches, nausea Reduced mental alertness 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 <sub>3</sub> )	Cough, chest tightness Difficulty taking a deep breath Worsened asthma symptoms Lung inflammation	Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO <sub>2</sub> )	Increased response to allergens Aggravation of respiratory illness	Same as carbon monoxide sources
Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	Hospitalizations for worsened heart diseases Emergency room visits for asthma Premature death	Cars and trucks (particularly diesels) Fireplaces and woodstoves Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO <sub>2</sub> )	Aggravation of respiratory disease (e.g., asthma and emphysema) 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 Nervous system impairment	Contaminated soil

Sources: California Air Resources Board, 2024, Common Air Pollutants, <https://ww2.arb.ca.gov/resources/common-air-pollutants>, accessed September 11, 2024; South Coast Air Quality Management District, May 6, 2005, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>, accessed September 11, 2024.

A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.<sup>1, 2</sup>

- **Carbon Monoxide (CO)** is an odorless, invisible, flammable gas produced from incomplete combustion of fuels (e.g., burned in cars, engines, stoves, fireplaces, and furnaces) that can be dangerous to human health in high concentrations, especially indoors with little ventilation. CO also indirectly contributes to the buildup of GHGs by reacting with and using up hydroxyl (OH) radicals that would otherwise destroy tropospheric CH<sub>4</sub> and ozone, thus increasing their concentrations in the lower atmosphere. Nearly 70 percent of the Bay Area's carbon monoxide comes from motor vehicles and a substantial amount also comes from burning wood in fireplaces and woodstoves. State and federal controls on new cars and seasonal wood burning have been established to prevent CO from reaching harmful levels. The Bay Area has not exceeded the national or state standard for CO in several years and is formally recognized as a CO attainment area.
- **Reactive Organic Gases (ROGs)/Volatile Organic Compounds (VOCs)** are compounds that are considered a concern as both indoor and outdoor air pollutants. Indoors, ROG can pose a potential

<sup>1</sup> Bay Area Air Quality Management District, February 2024, *Bay Area Emissions Inventory*, <https://www.baaqmd.gov/~media/files/planning-and-research/emission-inventory/bay-area-emissions-inventory-summary-report.pdf?rev=aab699bc8277450598292f0537b2c2a7>, September 11, 2024.

<sup>2</sup> Bay Area Air Quality Management District, August 2023, *Pollutant Glossary*, <https://www.baaqmd.gov/en/about-air-quality/glossary>, September 11, 2024.



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health risk to occupants due to their toxicity. Outdoors, the primary concern of ROG is their contribution to the formation of photochemical smog and secondary PM. Most ROG are photochemically reactive and can interact with  $\text{NO}_x$ , thereby playing a critical role in determining the rate of ozone production (smog). There are no AAQS established for ROG. However, because they contribute to the formation of  $\text{O}_3$ , BAAQMD has established a significance threshold for this pollutant.

- **Nitrogen Oxides ( $\text{NO}_x$ )** is a group of highly reactive gases that form when nitrogen reacts with oxygen during combustion, especially at high temperatures. These compounds (including NO and  $\text{NO}_2$ ), can contribute significantly to air pollution, especially in cities and areas with high motor vehicle traffic. In the Bay Area,  $\text{NO}_2$  appears as a brown haze. At higher concentrations,  $\text{NO}_2$  can damage sensitive crops, such as beans and tomatoes, and aggravate respiratory problems. The United States Environmental Protection Agency (USEPA), CARB, and BAAQMD have all adopted measures to reduce emissions of  $\text{NO}_x$ . The BAAQMD places restrictions on pollutant sources, such as power plants, boilers, stationary turbines, and stationary engines, and addresses motor vehicle sources by working to change people's driving habits.
- **Sulfur Dioxide ( $\text{SO}_2$ )** are compounds that consist of sulfur and oxygen molecules with sulfur dioxide ( $\text{SO}_2$ ) being the predominant form found in the lower atmosphere.  $\text{SO}_2$  is a gas that reacts with other compounds to form sulfuric acid ( $\text{H}_2\text{SO}_4$ ), sulfurous acid ( $\text{H}_2\text{SO}_3$ ), and sulfate ( $\text{SO}_4$ ) particles harmful to humans. These contaminants can damage vegetation and negatively impact the health of both humans and animals. In the past,  $\text{SO}_x$  were a problem in the Bay Area, especially near the large oil refineries and chemical plants in Contra Costa County. However, BAAQMD has been controlling emissions from these sources since 1961, and no state or federal excesses of sulfur compound emissions have been recorded since 1976.
- **Particulate Matter (PM)** can be directly emitted from sources or formed secondarily when gaseous emissions react in the atmosphere. PM is composed of a mixture of small airborne particles suspended in liquid droplets (aerosols) floating in the air. These particles originate from a variety of man-made and natural sources, including fossil fuel combustion, refining crude oil, residential wood burning and cooking, wildfires, volcanoes, sea salt, and dust. Because they are so small, these particles can bypass the body's natural defenses and penetrate deep into the lungs, bloodstream, brain and other vital organs, and individual cells. Health studies have shown that exposure to PM can have a wide range of negative health effects, including asthma, chronic bronchitis, impaired lung development in children, heart attack, stroke, and premature death.

Residential wood burning is the largest source of PM in the Bay Area during the winter. While BAAQMD has made significant progress reducing overall PM levels through its Wood Burning Rule and other measures, it is still the most hazardous air pollutant in the Bay Area in terms of health impacts.

- **Suspended Particulate Matter ( $\text{PM}_{10}$ )** includes PM with an aerodynamic diameter of 10 micrometers or less and is small enough to penetrate deep in the lungs. Approximately 55 percent of San Francisco Bay Area Basin's (SFBAAB) total  $\text{PM}_{10}$  emissions are attributable to subsectors of road dust and construction activities.
- **Suspended Particulate Matter ( $\text{PM}_{2.5}$ )** includes PM with an aerodynamic diameter of 2.5 micrometers or less and thus comprises a portion of  $\text{PM}_{10}$ .  $\text{PM}_{2.5}$  is typically characterized as

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more potent because they are more likely to travel into the deeper parts of the lung, or even the bloodstream. PM deposited on the lung surface can induce tissue damage, lung inflammation, and other respiratory ailments. PM<sub>2.5</sub> exposure remains the leading public health risk and contributor to premature death from air pollution in the Bay Area.

Local jurisdictions have the option of developing community risk reduction plans to cumulatively reduce community wide PM<sub>2.5</sub> concentrations by following a comprehensive plan. Stationary source screening maps contain all the facilities in the Bay Area where a permit has been issued and that emit one or more toxic air contaminants (TACs). These stationary source screening maps can be used as a basis for community baseline conditions and to evaluate screening-level health risk impacts using the cavity effects equation. An alternative screening methodology is to use CARB's gas station screening tool to estimate cancer risk and chronic/acute hazards from gas station emissions.<sup>3</sup>

- **Ground-Level Ozone (O<sub>3</sub>)**, also known as smog, is created by chemical reactions between ozone precursors oxides of nitrogen and volatile organic compounds in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of these ozone precursors. Ozone is most likely to form in the summer and early fall on warm, windless, sunny days. Breathing ozone can aggravate asthma and other respiratory diseases, irritate the eyes, reduce visibility, and damage vegetation.

Motor vehicles are the greatest contributor to ozone in the Bay Area, accounting for more than 50 percent of ozone precursors in the region. California's motor vehicle emissions control program, along with the BAAQMD's regulatory controls, has significantly reduced Bay Area ozone concentrations in the last few decades.

- **Lead (Pb)** was historically and primarily exhausted from motor vehicles using leaded gasoline and found in commercial and residential paints before it was substantially controlled through regulations. Since its removal from gasoline, lead is now primarily produced from industrial processes (e.g., metal processing) and off-road sources (e.g., small aircraft). Monitoring data in the SFBAAB indicates that the level of lead is generally below state and federal-mandated health standards. Because emissions of lead are found only in projects that are permitted by BAAQMD, lead is not an air quality of concern for the proposed project.

## Toxic Air Contaminants

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." A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code Section 7412[b]) is a toxic air contaminant. 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

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<sup>3</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed September 12, 2024.

system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other health problems.<sup>4</sup> CARB has identified over 200 substances and groups of substances as TACs.<sup>5</sup> Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control measures. The majority of the estimated health risks from TACs can be attributed to relatively few compounds. The most important compounds are particulate matter from diesel-fueled engines.

## Diesel Particulate Matter

In 1998, CARB identified Diesel Particulate Matter (DPM) 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. According to BAAQMD, PM emitted from diesel engines contributes to more than 85 percent of the cancer risk in the SFBAAB. Cancer risk from TACs is highest near major DPM sources.<sup>6</sup>

### 4.2.1.2 REGULATORY FRAMEWORK

Federal, State, and local air districts have passed laws and regulations intended to control and enhance air quality. Land use in the EIR Study Area is subject to the rules and regulations imposed by the USEPA, CARB, the California Environmental Protection Agency (CalEPA), and BAAQMD. 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 Regulations

### *Ambient Air Quality Standards*

The Clean Air Act was passed in 1963 by the United States 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 pollution species. 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

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<sup>4</sup> United States Environmental Protection Agency, updated March 2024, Health and Environmental Effects of Hazardous Air Pollutants, <https://www.epa.gov/haps/health-and-environmental-effects-hazardous-air-pollutants>, accessed September 12, 2024.

<sup>5</sup> California Air Resources Board, 2024, CARB Identified Toxic Air Contaminants, <https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants>, accessed September 12, 2024.

<sup>6</sup> Bay Area Air Quality Management District, April 2014, Improving Air Quality & Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective & Path Forward (2004-2013), [https://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CARE%20Program/Documents/CARE\\_Retrospective\\_April2014.ashx?la=en](https://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CARE%20Program/Documents/CARE_Retrospective_April2014.ashx?la=en), accessed September 12, 2024.

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earliest practical date. The California AAQS tends to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

Both California and the federal government have established health based AAQS for seven air pollutants, which are shown in Table 4.2-2, *Ambient Air Quality Standards for Criteria Pollutants*. These National AAQS 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. California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:<sup>7</sup>

- Assembly Bill (AB) 1493: Pavley Fuel Efficiency Standards.
- Heavy-Duty (Tractor-Trailer) GHG Regulation.
- Advanced Clean Cars Regulation.
- Advanced Clean Fleets Regulation.
- Senate Bill (SB) 1078 and SB 107: Renewables Portfolio Standards.
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards.
- Title 24, Part 6, CCR: Building Energy Efficiency Standards.
- Title 24, Part 11, CCR: Green Building Standards Code.

**TABLE 4.2-2 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA AIR POLLUTANTS**

Pollutant	Averaging Time	California Standard <sup>a</sup>	Federal Primary Standard <sup>b</sup>	Major Pollutant Sources
Ozone (O <sub>3</sub> ) <sup>c</sup>	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 <sub>2</sub> )	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 <sub>2</sub> )	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	ppm	0.075 ppm	
	24 hours	ppm	0.14 ppm	
Respirable Coarse	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	*	Dust and fume-producing construction, industrial, and agricultural operations,

<sup>7</sup> See Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR for a description of regulations that reduce emissions including Assembly Bill 32, also known as the Global Warming Solutions Act, Senate Bill 375, also known as the Sustainable Communities and Climate Protection Act. See Chapter 4.15, *Transportation*, of this Draft EIR for a description on Senate Bill 743, and how it relates to reducing vehicle miles traveled (VMT).

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**TABLE 4.2-2 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA AIR POLLUTANTS**

Pollutant	Averaging Time	California Standard <sup>a</sup>	Federal Primary Standard <sup>b</sup>	Major Pollutant Sources
Particulate Matter (PM <sub>10</sub> )	24 hours	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
Respirable Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>d,e</sup>	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	9 µg/m <sup>3</sup>	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 <sup>3</sup>	
Lead (Pb)	30-Day Average	1.5 µg/m <sup>3</sup>	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m <sup>3</sup>	
	Rolling 3-Month Average	*	0.15 µg/m <sup>3</sup>	
Sulfates (SO <sub>4</sub> ) <sup>f</sup>	24 hours	25 µg/m <sup>3</sup>	No Federal Standard	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	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.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H <sub>2</sub> S) 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 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Notes: ppm: parts per million; µg/m<sup>3</sup>: micrograms per cubic meter

\* Standard has not been established for this pollutant/duration by this entity.

a. California standards for O<sub>3</sub>, CO (except 8-hour Lake Tahoe), SO<sub>2</sub> (1 and 24 hour), NO<sub>2</sub>, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, 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.

b. National standards (other than O<sub>3</sub>, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O<sub>3</sub> 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<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, 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.

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**TABLE 4.2-2 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA AIR POLLUTANTS**

Pollutant	Averaging Time	California Standard <sup>a</sup>	Federal Primary Standard <sup>b</sup>	Major Pollutant Sources
<p>c. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.</p> <p>d. On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.</p> <p>e. On February 7, 2024, the national annual PM<sub>2.5</sub> standard was lowered from 12 µg/m<sup>3</sup> to 9 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary), secondary annual PM<sub>2.5</sub> standard, and PM<sub>10</sub> standards (primary and secondary) were retained.</p> <p>f. On June 2, 2010, a new 1-hour SO<sub>2</sub> 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.</p> <p>Source: California Air Resources Board, July, 2024, <i>Ambient Air Quality Standards</i>, <a href="https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf">https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf</a>.</p>				

### *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 reduce exposure to these contaminants to protect public health. A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code Section 7412[b]) is a toxic air contaminant. Under State law, CalEPA, 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). AB 1807 sets 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 designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the airborne toxics control measure must reduce exposure to below that threshold. If there is no safe threshold, the airborne toxics control measure must incorporate toxics best available control technology to minimize emissions. To 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<sup>8</sup> 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.

<sup>8</sup> Each district is responsible for establishing the prioritization score threshold at which facilities are required to prepare a health risk assessment. In the Bay Area, facilities that generate a cancer risk of greater or equal to 10 in a million and a non-cancer chronic or acute risk greater or equal to 10 in a million are high priority facilities. Types of facilities that have the potential to generate risks of this level include refineries, other heavy industrial manufacturing/industrial processes, and fueling stations.

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

- 13 CCR Chapter 10 Section 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 Section 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 Section 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*, was established to control emissions associated with diesel-powered TRUs.

### 4.2.1.3 REGIONAL REGULATIONS

#### *Bay Area Air Quality Management District*

BAAQMD is the agency responsible for ensuring that the National and California AAQS are attained and maintained in the SFBAAB. Air quality conditions in the SFBAAB have improved significantly since BAAQMD was created in 1955.<sup>9</sup> BAAQMD prepares air quality management plans (AQMP) to attain ambient air quality standards in the SFBAAB. BAAQMD prepares ozone attainment plans for the National O<sub>3</sub> standard and clean air plans for the California O<sub>3</sub> standard BAAQMD prepares these air quality management plans in coordination with Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) to ensure consistent assumptions about regional growth.

#### 2017 Clean Air Plan

BAAQMD adopted the 2017 *Clean Air Plan, Spare the Air, Cool the Climate* (2017 Clean Air Plan) on April 19, 2017, making it the most recently adopted comprehensive plan. The 2017 Clean Air Plan incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2017 Clean Air Plan serves as an update to the adopted Bay Area 2010 Clean Air Plan and continues to provide the framework for SFBAAB to achieve attainment of the California and National AAQS. The 2017 Clean Air Plan updates the Bay Area's ozone plan, which is based on the "all feasible measures" approach to meet the requirements of the California Clean Air Act. Additionally, it sets a goal of reducing health risk impacts to local communities by 20 percent between 2015 and 2020. Furthermore the 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the State's 2030 GHG

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<sup>9</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed September 12, 2024.

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reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:<sup>10</sup>

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

A multipollutant control strategy was developed to be implemented in the next three to five years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, TACs, and GHG from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; and 8) super-GHG pollutants.

The control strategy includes these key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of “super-GHGs” such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
- Increase efficiency of the energy and transportation systems.
- Reduce demand for vehicle travel and high-carbon goods and services.
- Decarbonize the energy system.
- Make the electricity supply carbon-free.
- Electrify the transportation and building sectors.

### Community Air Risk Evaluation (CARE) Program

The BAAQMD’s Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area, primarily DPM. The last update to this program was conducted in 2014. Based on findings of the 2014 report, DPM was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light duty trucks were also identified as significant cancer risks: 1,3-butadiene contributed 4 percent of the cancer risk-weighted emissions and benzene contributed 3 percent. Collectively, five compounds—DPM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All of these compounds are associated with emissions from internal combustion engines. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and

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<sup>10</sup> Bay Area Air Quality Management District, April 2017, *Final 2017 Clean Air Plan, Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area*, [https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_-proposed-final-cap-vol-1-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en), accessed September 12, 2024.



harbor craft (13 percent). Overall, cancer risk from TACs dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for State diesel regulations and other reductions.<sup>11</sup>

The major contributor to acute and chronic noncancer health effects in the SFBAAB is acrolein (C<sub>3</sub>H<sub>4</sub>O). Major sources of acrolein are on-road mobile sources and aircraft near freeways and commercial and military airports.<sup>12</sup> Currently CARB does not have certified emission factors or an acrolein analytical test method for stationary sources. Since the appropriate tools needed to implement and enforce acrolein emission limits are not available, BAAQMD does not conduct health risk screening analysis for acrolein emissions.<sup>13</sup>

### Assembly Bill 617 Community Action Plans

AB 617 (C. Garcia, Chapter 136, Statutes of 2017) was signed into law in July 2017 to develop a new community-focused program to more effectively reduce exposure to air pollution and preserve public health in environmental justice communities. AB 617 directs CARB and all local air districts to take measures to protect communities disproportionately impacted by air pollution by monitoring emissions and implementing air pollution control strategies.

On September 27, 2018, CARB approved BAAQMD's recommended communities for monitoring and emission-reduction planning. The State approved communities for year 1 of the program as well as communities that would move forward over the next five years. Bay Area recommendations included all the Community Air Risk Evaluation areas as well as areas with large sources of air pollution (refineries, seaports, airports, etc.), areas identified via statewide screening tools as having pollution and/or health burden vulnerability, and areas with low life expectancy.<sup>14</sup>

- Year 1 Communities:
  - West Oakland. The West Oakland community was selected for BAAQMD's first Community Action Plan. In 2017, cancer risk from sources in West Oakland (local sources) was 204 in a million. The primary sources of air pollution in West Oakland include heavy trucks and cars, port

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<sup>11</sup> Bay Area Air Quality Management District, April 2014, Improving Air Quality & Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective & Path Forward (2004-2013), [https://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CARE%20Program/Documents/CARE\\_Retrospective\\_April2014.ashx?la=en](https://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CARE%20Program/Documents/CARE_Retrospective_April2014.ashx?la=en), accessed September 12, 2024.

<sup>12</sup> Bay Area Air Quality Management District, September 2006, Community Air Risk Evaluation Program: Phase I Findings and Policy Recommendations Related to Toxic Air Contaminants in the San Francisco Bay Area, [https://www.baaqmd.gov/~media/files/planning-and-research/care-program/care\\_p1\\_findings\\_recommendations\\_v2.pdf](https://www.baaqmd.gov/~media/files/planning-and-research/care-program/care_p1_findings_recommendations_v2.pdf), accessed September 12, 2024.

<sup>13</sup> Bay Area Air Quality Management District, December 2021, *Air Toxics Control Programs Health Risk Assessment Guidelines*, [https://www.baaqmd.gov/~media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20211215\\_hraguidelines-pdf.pdf?rev=eb18ff83f96049fa84d54552b58baee3#:~:text=This%20grid%20shall%20be%20of,subject%20to%20Air%20District%20approval.&text=For%20a%20stochastic%2C%20multipathway%20risk,the%2095th%20percentile%20cancer%20risk](https://www.baaqmd.gov/~media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20211215_hraguidelines-pdf.pdf?rev=eb18ff83f96049fa84d54552b58baee3#:~:text=This%20grid%20shall%20be%20of,subject%20to%20Air%20District%20approval.&text=For%20a%20stochastic%2C%20multipathway%20risk,the%2095th%20percentile%20cancer%20risk), accessed September 12, 2024.

<sup>14</sup> Bay Area Air Quality Management District, April 16, 2019, *San Francisco Bay Area Community Health Protection Program*, [https://www.baaqmd.gov/~media/files/ab617-community-health/2019\\_0325\\_ab617onepager-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en), accessed September 12, 2024.

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and rail sources, large industries, and, to a lesser extent, other sources such as residential sources (i.e., wood burning). The majority (over 90 percent) of cancer risk is from DPM<sub>2.5</sub>.<sup>15</sup>

- Richmond. Richmond was selected for a community monitoring plan in year 1 of the AB 617 program. The Richmond area is in western Contra Costa County and includes most of the City of Richmond and portions of El Cerrito. It also includes the following unincorporated areas in Contra Costa County: Bay View, East Richmond Heights, Rollingwood, Tara Hills, Montalvin Manor, North Richmond, and El Sobrante. The Path to Clean Air Plan (PTCA Plan) was adopted in April 2024 and includes strategies to reduce harmful air pollution emissions and exposure to PTCA communities. The Plan lays out a series of measures to be implemented over the next ten years by State, regional, and local agencies to reduce pollution in the community.<sup>16</sup>
- Year 2 to 5 Communities: East Oakland/San Leandro, Eastern San Francisco, the Pittsburg-Bay Point area, San Jose, Tri-Valley, and Vallejo are slated for action in years 2 to 5 of the AB 617 program.<sup>17</sup>

As identified above, AB 617 is not directly applicable to San Carlos since BAAQMD has not currently designated the City of San Carlos or communities within the EIR Study Area as disproportionately impacted by air pollution in either the Year 1 or Year 2-to-5 communities.

### Air District Rules and Regulations

#### Regulation 7, Odorous Substances

Sources of objectionable odors may occur within the EIR Study Area. BAAQMD's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*, which states that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property." Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

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<sup>15</sup> Bay Area Air Quality Management District, October 2019, *Owning Our Air: The West Oakland Community Action Plan*, [https://www.baaqmd.gov/~media/files/ab617-community-health/west-oakland/2019-meetings/100219-files/final-plan-vol-1-100219-pdf.pdf?rev=77062b14b6e64f1196ec7c9aa870d82d&sc\\_lang=en](https://www.baaqmd.gov/~media/files/ab617-community-health/west-oakland/2019-meetings/100219-files/final-plan-vol-1-100219-pdf.pdf?rev=77062b14b6e64f1196ec7c9aa870d82d&sc_lang=en), accessed September 12, 2024.

<sup>16</sup> Bay Area Air Quality Management District, April 2024, *The Path to Clean Air, Richmond, North Richmond & San Pablo Community Emissions Reduction Plan*, [https://www.baaqmd.gov/~media/files/ab617-community-health/richmond/2024/042024-final-ptca-plan-files/ptca-plan\\_final\\_april-2024-pdf.pdf?rev=275660fc2f6c4eeca35b13451b99856&sc\\_lang=en](https://www.baaqmd.gov/~media/files/ab617-community-health/richmond/2024/042024-final-ptca-plan-files/ptca-plan_final_april-2024-pdf.pdf?rev=275660fc2f6c4eeca35b13451b99856&sc_lang=en), accessed September 12, 2024.

<sup>17</sup> Bay Area Air Quality Management District, April 16, 2019, *San Francisco Bay Area Community Health Protection Program*, [https://www.baaqmd.gov/~media/files/ab617-community-health/2019\\_0325\\_ab617onepager-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en), accessed September 12, 2024.

## Naturally Occurring Asbestos Program

To reduce public exposure to naturally occurring asbestos, BAAQMD places Airborne Toxic Control Measures to regulate all construction, maintenance, grading, and mining activities that could potentially produce dust containing naturally occurring asbestos.<sup>18</sup> The Naturally Occurring Asbestos Program also requires the best available dust mitigation measures to be followed to reduce exposure to airborne asbestos.<sup>19</sup>

## Other BAAQMD Regulations

In addition to the plans and programs described above, BAAQMD administers several specific regulations on various sources of pollutant emissions that would apply to future development constructed, including:

- Regulation 2, Rule 2, *Permits, New Source Review*
- Regulation 2, Rule 5, *New Source Review of Toxic Air Contaminants*
- Regulation 6, Rule 1, *General Requirements*
- Regulation 6, Rule 2, *Commercial Cooking Equipment*
- Regulation 8, Rule 3, *Architectural Coatings*
- Regulation 8, Rule 4, *General Solvent and Surface Coatings Operations*
- Regulation 11, Rule 2, *Asbestos, Demolition, Renovation and Manufacturing*

## City/Council Association of Governments of San Mateo County

The City/Council Association of Governments of San Mateo County (C/CAG) is the congestion management agency for San Mateo County. C/CAG is tasked with developing a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision making and air quality plans. C/CAG's latest congestion management program (CMP) is the 2023 San Mateo County CMP Update adopted October 2023.<sup>20</sup> C/CAG's countywide transportation model must be consistent with the regional transportation model developed by the MTC with ABAG data and is used to help evaluate cumulative transportation impacts of local land use decisions on the CMP system. In addition, C/CAG's updated CMP includes multimodal performance standards, trip reduction programs, and transportation demand management (TDM) strategies consistent with the goal of reducing regional VMT in accordance with SB 375.

<sup>18</sup> Bay Area Air Quality Management District, updated April 2018, Naturally Occurring Asbestos. <https://www.baaqmd.gov/en/permits/asbestos/naturally-occurring-asbestos>, accessed September 12, 2024.

<sup>19</sup> Bay Area Air Quality Management District, June 2024, Compliance Advisory, Naturally Occurring Asbestos Program Fee Change. [https://www.baaqmd.gov/~media/files/compliance-and-enforcement/advisories/asbestos-atcm/2024\\_noa\\_advisory\\_reg3schedules-final-pdf.pdf?rev=ae4749e342c24101acdd1159bb28c954](https://www.baaqmd.gov/~media/files/compliance-and-enforcement/advisories/asbestos-atcm/2024_noa_advisory_reg3schedules-final-pdf.pdf?rev=ae4749e342c24101acdd1159bb28c954), accessed September 12, 2024.

<sup>20</sup> City/County Association of Governments of San Mateo County, October 2023, *San Mateo County Congestion Management Plan*, <https://ccag.ca.gov/wp-content/uploads/2024/02/CCAGCMP2023Final-wAppendix.pdf>, accessed September 11, 2024.

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Strategies identified in the 2023 CMP for San Mateo County, where local jurisdictions are responsible agencies, include:

- **Designated Roadway System.** Establish and maintain the designated CMP roadway system that allows performance monitoring in terms of established level-of-service (LOS) standards.
- **Roadway System LOS.** Establish LOS standards using the Transportation Research Board's Circular 212, the latest version of the Highway Capacity Manual (HCM) or a C/CAG adopted alternative that is consistent with the HCM.
- **System Performance.** Establish performance measures to evaluate current and future multimodal system performance for the movement of people and goods.
- **Trip Reduction and Travel Demand Element.** Promote alternative transportation methods to reduce traffic congestion, increase use of park-and-ride lots, improvements in the balance between jobs and housing, and other strategies for reducing vehicle trips, including flexible work hours, telecommuting, and parking management programs.
- **Land Use Impact Analysis Program.** Analyze the impacts of land use decisions made by local jurisdictions on the regional transportation system (both highways and transit).
- **Deficiency Plan Guidelines.** Determine every two years whether San Mateo County, including cities/towns within the county, conform to the requirements of the CMP based on information obtained through monitoring.
- **Capital Improvement Program.** Include a seven-year Capital Improvement Program to maintain or improve the performance of the multimodal system for the movement of people and goods and to mitigate regional transportation impacts identified through the Land Use Analysis Program.
- **Database and Travel Demand Model.** In consultation with the regional transportation planning agency, cities, and the county, develop a uniform database on traffic impacts for use in a countywide travel demand model.

### *Plan Bay Area 2050*

MTC and ABAG adopted *Plan Bay Area 2050* on October 21, 2021.<sup>21</sup> *Plan Bay Area* provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of SB 375. Strategies to reduce GHG emissions include focusing housing and commercial construction in walkable, transit-accessible places; investing in transit and active transportation; and shifting the location of jobs to encourage shorter commutes. As part of the implementing framework for *Plan Bay Area*, local governments have identified Priority Development Areas (PDAs) and Transit Priority Areas (TPAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. TPAs are half-mile buffers surrounding major transit stops or terminals. As shown on Figure 4-1, *Priority Development Areas and Transit Priority*

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<sup>21</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed September 11, 2024.

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*Areas*, in Chapter 4, *Environmental Analysis*, of this Draft EIR, the northeastern region of the EIR Study Area includes PDAs and TPAs.

### *Nitrogen Oxides from Natural Gas-Fired Furnaces, Boilers, and Water Heaters*

BAAQMD adopted amendments to Regulation 9, Inorganic Gaseous Pollutants, Rule 4, *Nitrogen Oxides from Natural Gas-Fired Furnaces* (Rule 9-4) and Rule 6, *Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters* (Rule 9-6). Space- and water-heating appliances generate a large portion of nitrogen oxide (NO<sub>x</sub>) emissions from sources in the Bay Area. NO<sub>x</sub> is a key criteria pollutant as a precursor to ozone and secondary particulate matter (PM) formation. The amendments would require more stringent NO<sub>x</sub> emission standards for space- and water-heating appliances within BAAQMD's jurisdiction starting in year 2023 and would substantially reduce NO<sub>x</sub> emissions from these appliances commonly found in single-family homes and commercial applications.

The amendments to Rules 9-4 and 9-6 include the following elements:

- Sales and installation of smaller water heaters and boilers (below 75,000 BTU/hour) must be zero emission, starting in 2027.
- Sales and installation of furnaces (heat input rate less than 175,000 BTU/hour) must be zero emission starting in 2029.
- Sales of larger water heaters and boilers (between 75,000 and 2 million BTU/hour) must be zero emission starting in 2031.
- Existing appliances can remain in operation, but the rule would apply once they need replacement.

## Local Regulations

### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.2.3, *Impact Discussion*.

### *City of San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to air quality as follows:

- Chapter 8.06, *Smoking Control*, restricts and regulates smoking in public places in order to protect the public health and welfare against the proven health hazards and harmful effects of secondhand smoke.
- Chapter 8.08, *Recycling and Diversion of Construction and Demolition Debris*, requires the recycling of construction and demolition debris to help the City reduce landfill waste, foster resource conservation, and help the City meet and exceed a diversion rate of 50 percent per AB 939.

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- Chapter 8.60, *Mandatory Organic Waste Disposal Reduction*, list requirements for organic waste generators, in compliance with state recycling laws, state organic recycling laws, and Short-Lived Climate Pollutant Reduction Act of 2016.
- Chapter 18.18, *Landscaping*, preserves, maintains, and provides regulations of trees for the health and welfare of the City; provide habitat; counteract the pollutants in the air; and maintain the climatic balance.
- Chapter 18.21, *Performance Standards*, establishes permissible limits and permits objective measurement of nuisance, hazards, and objectionable conditions to ensure protection of the community. Section 18.21.090, *Air Contaminants*, specify that sources of air pollution shall comply with all rules established by the Environmental Protection Agency (Code of Federal Regulations, Title 40), CARB, and BAAQMD.
- Chapter 18.25, *Transportation Demand Management*, aims to reduce amount of traffic generated by new development and promotion of more efficient utilization of existing transportation facilities.

### *Climate Mitigation and Adaptation Plan*

Adopted in September 2021, the City of San Carlos 2021 Climate Mitigation and Adaptation Plan (CMAP) is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the city.<sup>22</sup> This CMAP is an update of the 2009 Climate Action Plan, providing updated information, an expanded set of GHG reduction strategies, climate adaptation strategies, and a planning horizon out to 2050.

The CMAP allows City decision-makers, staff, and the community to understand the sources and magnitude of local GHG emissions and identifies future strategies that, if implemented, will allow the community to achieve its emissions-reductions targets. In conjunction with existing local and state programs, these CMAP strategies provide a flexible path to reduce the community's annual GHG emissions to 107,920 MTCO<sub>2</sub>e by 2030 (49 percent below 2005 levels) and 36,060 MTCO<sub>2</sub>e by 2050 (83 percent below 2005 levels). The City's GHG reduction targets are to reduce emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, at a minimum. To ensure that the implementation process is efficient, the CMAP includes a work plan that identifies responsible departments, partners, time frames, and relative costs associated with each strategy.

### 4.2.1.4 EXISTING CONDITIONS

#### San Francisco Bay Area Basin Conditions

The SFBAAB comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties; the southern portion of Sonoma County; and the southwestern portion of Solano County. Air quality in the SFBAAB is determined by such natural factors as topography, meteorology, and climate

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<sup>22</sup> City of San Carlos, September 2021, *2021 Climate Mitigation and Adaptation Plan*, <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/City%20Manager/Sustainability/Climate%20Action/CMAP%20Final.pdf>, accessed September 11, 2024.

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in addition to the presence of existing air pollution sources and ambient conditions, as described below:<sup>23</sup>

- **Meteorology:** The SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, that distorts normal wind flow patterns. The Coast Range<sup>24</sup> splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allows air to flow in and out of the Bay Area and the Central Valley. The climate is dominated by the strength and location of a semipermanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold-water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.
- **Predominant Wind Patterns:** During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais in Marin County, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San José when it meets the East Bay hills. Wind speeds may be strong locally in areas where air is channeled through a narrow opening such as the Carquinez Strait, the Golden Gate, or the San Bruno gap. The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon, and the sea breeze deepens and increases in velocity while spreading inland. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. In the winter, stormy conditions with moderate to strong winds are frequent, as are periods of stagnation with very light winds. Winter stagnation episodes (i.e., conditions where there is little mixing because of little or no wind) are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the SFBAAB.
- **Wind Circulation:** Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak—namely, commuter traffic (early morning) and wood-burning appliances (nighttime). The problem can be compounded in valleys, when weak

<sup>23</sup> Bay Area Air Quality Management District, May 2017, *California Environmental Quality Act: Air Quality Guidelines*, [https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en), accessed September 11, 2024.

<sup>24</sup> The Coast Ranges traverses California's west coast from Humboldt County to Santa Barbara County.

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flows carry the pollutants up-valley during the day, and cold air drainage flows move the air mass down-valley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthy levels.

- **Inversions:** An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly. Elevation inversions<sup>25</sup> are more common in the summer and fall, and radiation inversions<sup>26</sup> are more common during the winter. The highest air pollutant concentrations generally occur during inversions.
- **Temperature:** Summer temperatures are determined in large part by the effect of differential heating between land and water surfaces. On summer afternoons, the temperatures at the coast can be 35 degrees Fahrenheit cooler than temperatures 15 to 20 miles inland; at night, this contrast usually decreases to less than 10 degrees Fahrenheit. In the winter, the relationship of minimum and maximum temperatures is reversed. During the day the temperature contrast between the coast and inland areas is small, and at night it is large.
- **Precipitation:** The SFBAAB is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the SFBAAB to another, even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys. During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants disperse more readily into the atmosphere rather than accumulate under stagnant conditions). However, during the winter, frequent dry periods do occur, where mixing and ventilation are low and pollutant levels build up.

## Attainment Status of the SFBAAB

The AQMP provides the framework for air quality basins to achieve attainment of the State and federal AAQS through the State Implementation Plan. Areas that meet AAQS are classified as attainment areas, and areas that do not meet these standards are classified as nonattainment areas. Severity classifications for O<sub>3</sub> range from marginal, moderate, and serious to 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.

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<sup>25</sup> When the air blows over elevated areas, it is heated as it is compressed into the side of the hill/mountain. When that warm air comes over the top, it is warmer than the cooler air of the valley.

<sup>26</sup> During the night, the ground cools off, radiating the heat to the sky.



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- **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 SFBAAB is shown in Table 4.2-3, *Attainment Status of Criteria Pollutants in the San Francisco Bay Area Air Basin*. The SFBAAB is currently designated a nonattainment area for California and National O<sub>3</sub>, California and National PM<sub>2.5</sub>, and California PM<sub>10</sub> AAQS.

**TABLE 4.2-3 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SAN FRANCISCO BAY AREA AIR BASIN**

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment	Classification revoked (2005)
Ozone – 8-hour	Nonattainment (serious)	Nonattainment (marginal) <sup>a</sup>
PM <sub>10</sub> – 24-hour	Nonattainment	Unclassified/ Attainment <sup>b</sup>
PM <sub>2.5</sub> – 24-hour and Annual	Nonattainment	Unclassified/ Attainment
CO – 8-hour and 1-hour	Attainment	Attainment
NO <sub>2</sub> – 1-hour	Attainment	Unclassified
SO <sub>2</sub> – 24-hour and 1-hour	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	Unclassified/Attainment

Notes:

a. Severity classification current as of February 13, 2017.

b. In December 2014, USEPA issued final area designations for the 2012 primary annual PM<sub>2.5</sub> National AAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Sources: California Air Resources Board, October 2020, Maps of State Area Designations, <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>, accessed September 12, 2024.

## Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the city have been documented and measured by BAAQMD. BAAQMD has 30 operational monitoring stations around the Bay Area.<sup>27</sup> The nearest station to the EIR Study Area is the Redwood City Monitoring Station, which monitors O<sub>3</sub>, NO<sub>2</sub>, and PM<sub>2.5</sub>. Data for PM<sub>10</sub> is supplemented by the San José-Jackson Street Monitoring Station. Data from these monitoring stations are summarized in Table 4.2-4, *Ambient Air Quality Monitoring Summary*, and shows occasional violations of the federal PM<sub>2.5</sub> standard. Based on

<sup>27</sup> Bay Area Air Quality Management District, July 2024, *2024 Annual Air Monitoring Network Plan*, [https://www.baaqmd.gov/~media/files/technical-services/air-monitoring-network-plans/2024\\_network\\_plan-pdf.pdf?rev=03780ced2a2a41909338416d1b2bc527&sc\\_lang=en](https://www.baaqmd.gov/~media/files/technical-services/air-monitoring-network-plans/2024_network_plan-pdf.pdf?rev=03780ced2a2a41909338416d1b2bc527&sc_lang=en), accessed September 11, 2024.

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BAAQMD’s Impacted Communities Map, the City of San Carlos is not within a 24-hour PM<sub>2.5</sub> or 8-hour Ozone exceedance area.<sup>28</sup>

**TABLE 4.2-4 AMBIENT AIR QUALITY MONITORING SUMMARY**

Pollutant/Standard <sup>a</sup>	Number of Days Thresholds Were Exceeded and Maximum Levels		
	2020	2021	2023
<b>Ozone (O<sub>3</sub>) <sup>a</sup></b>			
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	0	0	0
State & Federal 8-hour ≥ 0.070 ppm (days exceed threshold)	0	0	0
Max. 1-Hour Conc. (ppm)	0.085	0.079	0.089
Max. 8-Hour Conc. (ppm)	0.063	0.061	0.061
<b>Nitrogen Dioxide (NO<sub>2</sub>) <sup>a</sup></b>			
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0
Federal 1-Hour ≥ 0.100 ppm (days exceed threshold)	0	0	0
Max. 1-Hour Conc. (ppm)	0.0405	0.0438	0.0552
<b>Coarse Particulates (PM<sub>10</sub>) <sup>b</sup></b>			
State 24-Hour > 50 µg/m <sup>3</sup> (days exceed threshold)	0	0	0
Federal 24-Hour > 150 µg/m <sup>3</sup> (days exceed threshold)	0	0	0
Max. 24-Hour Conc. (µg/m <sup>3</sup> )	45.1	44.5	*
<b>Fine Particulates (PM<sub>2.5</sub>) <sup>a</sup></b>			
Federal 24-Hour > 35 µg/m <sup>3</sup> (days exceed threshold)	0	0	1
Max. 24-Hour Conc. (µg/m <sup>3</sup> )	30.1	27.4	41.0

Notes: ppm = parts per million; ppb = parts per billion; µg/m<sup>3</sup> = micrograms per cubic meter; \* = Data not available

a. Data for O<sub>3</sub>, NO<sub>2</sub> and PM<sub>2.5</sub> obtained from the Redwood City Monitoring Station.

b. Data for PM<sub>10</sub> obtained from the San José-Jackson Street Monitoring Station.

Source: California Resources Board, Air Pollution Data Monitoring Cards (2021, 2022, and 2023),

<https://www.arb.ca.gov/adam/topfour/topfour1.php>.

## 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. BAAQMD defines sensitive receptors as “Facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas.”<sup>29</sup>

<sup>28</sup> Bay Area Air Quality Management District, 2024, *Community Air Risk Evaluation Program*, <https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program>, accessed September 11, 2024.

<sup>29</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed September 11, 2024.

### *Environmental Justice Communities*

Disadvantaged communities identified by CalEnviroScreen 4.0 (CES4) may be disproportionately affected by and vulnerable to poor air quality.<sup>30, 31</sup> Figure 4.2-1, *BAAQMD Overburdened Communities Map*, shows the areas that, according to BAAQMD, are disproportionately burdened by pollution. These Overburdened Communities were mapped using the CES4, a tool advocated for by community groups and developed by the State Office of Environmental Health Hazard Assessment (OEHHA) on behalf of the CalEPA.

The CES cumulative score is a cumulative measure of overall environmental justice burden based on 24 indicators, including pollution, social, and health indicators, four of which are specifically having to do with air quality or air pollution (see Figure 4.2-2, *CES4 Indicator – Cumulative Score by Percentile*). BAAQMD uses the CES tool to identify environmental justice communities (referred to as Overburdened Communities) and areas of the San Francisco Bay Area where air pollution disparities are the greatest.

### *Placement of New Sensitive Receptors*

BAAQMD adopted *Planning Healthy Places* to provide a list of best practices that should be applied when placing sensitive land uses in areas with high levels of air pollution or in close proximity to local sources of air pollution.<sup>32</sup> The overarching goal of this guidebook is to support and encourage infill development while promoting clean, healthy air for existing and future residents.

Figure 4.2-3, *BAAQMD Siting Recommendations*, identifies stationary sources (BAAQMD-permitted sources) in the EIR Study Area as well as major roadways where BAAQMD recommends either implementation of best management practices to reduce risk or preparation of site-specific analysis to ensure air quality compatibility.

The key observation in BAAQMD's *Planning Healthy Places* is that proximity to air pollution sources substantially increases both exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic: DPM from trucks and benzene, and 1,3-butadiene from passenger vehicles. In *Planning Healthy Places*, BAAQMD provides a list of "Best Practices to Reduce Exposure to Local Air Pollution" that BAAQMD recommends lead agencies require for projects that introduce new receptors within the screening distances shown in Figure 4.2-1. These best practices include practices and technologies that reduce local traffic emissions, increase site buffering between receptors and emission sources, or alter

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<sup>30</sup> Under Senate Bill 535, disadvantaged communities are defined as the top 25% scoring areas from CalEnviroScreen along with other areas with high amounts of pollution and low populations.

<sup>31</sup> Office of Environmental Health Hazard Assessment, May 2023, CalEnviroScreen 4.0. Indicator Maps can be found at: <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>.

<sup>32</sup> Bay Area Air Quality Management District, 2016, April. *Planning Healthy Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning*. [https://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php\\_may20\\_2016-pdf.pdf?la=en](https://www.baaqmd.gov/~/media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en), accessed September 12, 2024.

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the design of proposed projects to remove receptors from locations expected to experience the highest pollutant concentrations.<sup>33</sup>

### *CalEnviroScreen Air Quality Indicators*

As discussed above, CES is a mapping tool that helps identify the California communities most affected by many sources of pollution and where people are especially vulnerable to pollution's effects. People in environmental justice areas identified by CES may be disproportionately affected by and vulnerable to poor air quality.

CES's "pollution burden" map identifies communities that are exposed to pollution from human activities, such as air pollution (ozone, PM<sub>2.5</sub>, DPM), water pollution (drinking water contaminants), and hazardous materials (pesticide use, children's lead exposure, toxic releases), and traffic density. Figure 4.2-4, *CES4 Indicator – Pollution Burden by Percentile*, shows the pollution burden for the areas within the EIR Study Area relative to California. In CES, the pollution burden scope considers the disproportionate effect of pollution on environmental justice communities, because the score weighs socioeconomic factors (educational attainment, poverty, etc.) and sensitivity of the population (asthma rates and cardiovascular disease).

Though the causes of asthma are poorly understood, it is well established that exposure to traffic and outdoor air pollutants can trigger asthma attacks. Previous research has shown that children, the elderly, racial and ethnic minorities, and low-income Californians suffer disproportionately from asthma burdens, such as asthma attacks and asthma-like symptoms.<sup>34</sup>

Figure 4.2-5, *CES4 – Diesel Particulate Matter by Percentile*, provides an estimate of the percentile of DPM in the EIR Study Area relative to the rest of the state. The DPM percentile is based on spatial distribution of gridded DPM emissions from on-road and non-road sources in 2016 (tons/year). Exposure to DPM has been shown to have numerous adverse health effects including irritation to the eyes, throat, and nose; cardiovascular and pulmonary disease; and lung cancer.<sup>35</sup>

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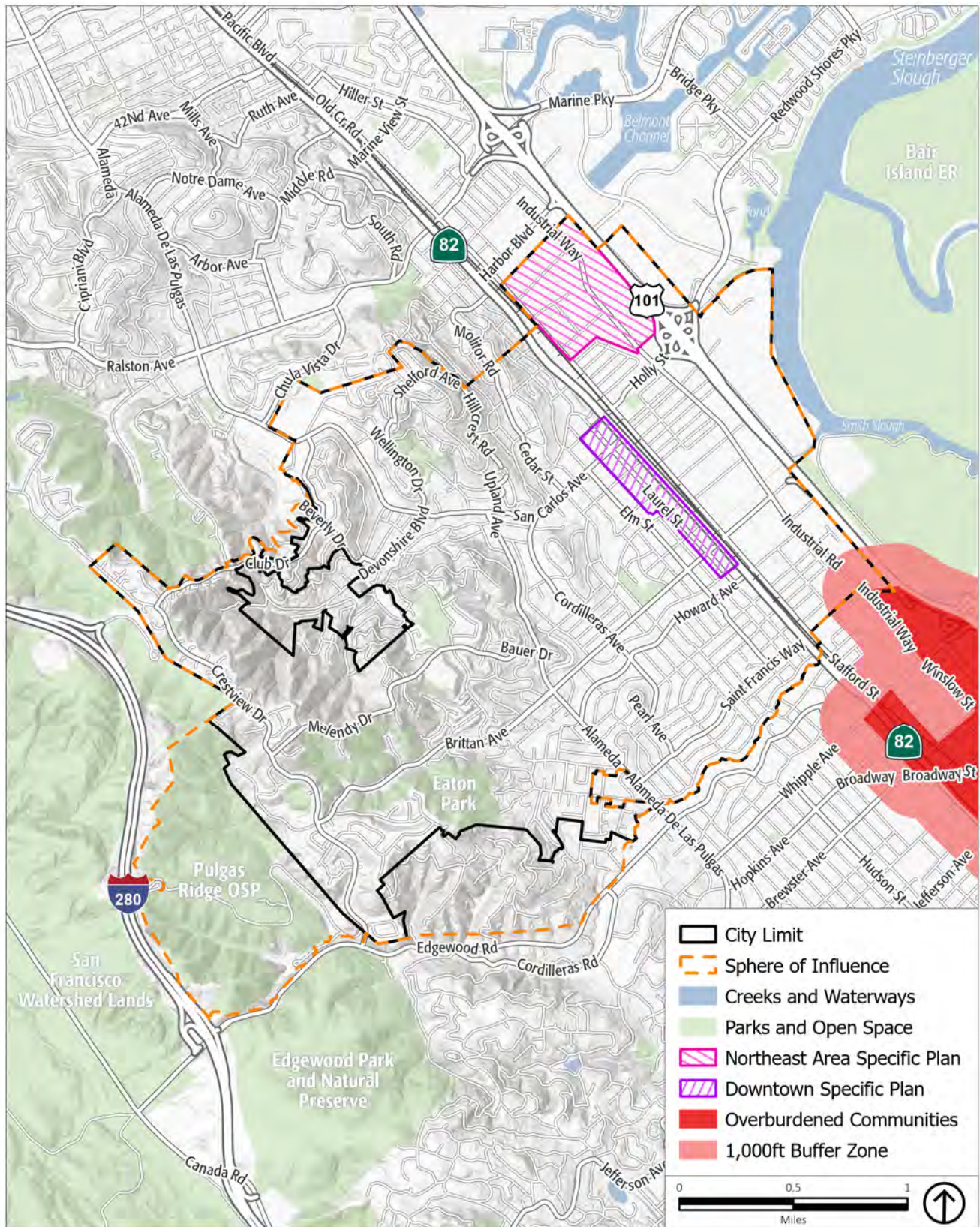
<sup>33</sup> Bay Area Air Quality Management District, 2016, May. Planning Healthy Places. [https://www.baaqmd.gov/~/media/files/planning-and-research/planning-healthy-places/php\\_may20\\_2016-pdf.pdf?la=en](https://www.baaqmd.gov/~/media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en), accessed September 12, 2024.

<sup>34</sup> California Air Resources Board, 2013, October. Higher 'asthma burden' among minorities, low-income groups tied to increased exposure to air pollution. <https://ww2.arb.ca.gov/news/higher-asthma-burden-among-minorities-low-income-groups-tied-increased-exposure-air-pollution>, accessed September 12, 2024.

<sup>35</sup> Office of Environmental Health Hazard Assessment (OEHHA), 2021, October 13. CalEnviroScreen (CES) 4.0 Report. <https://oehha.ca.gov/media/downloads/calenviroscreen/report/calenviroscreen40reportf2021.pdf>, accessed October 14, 2024.



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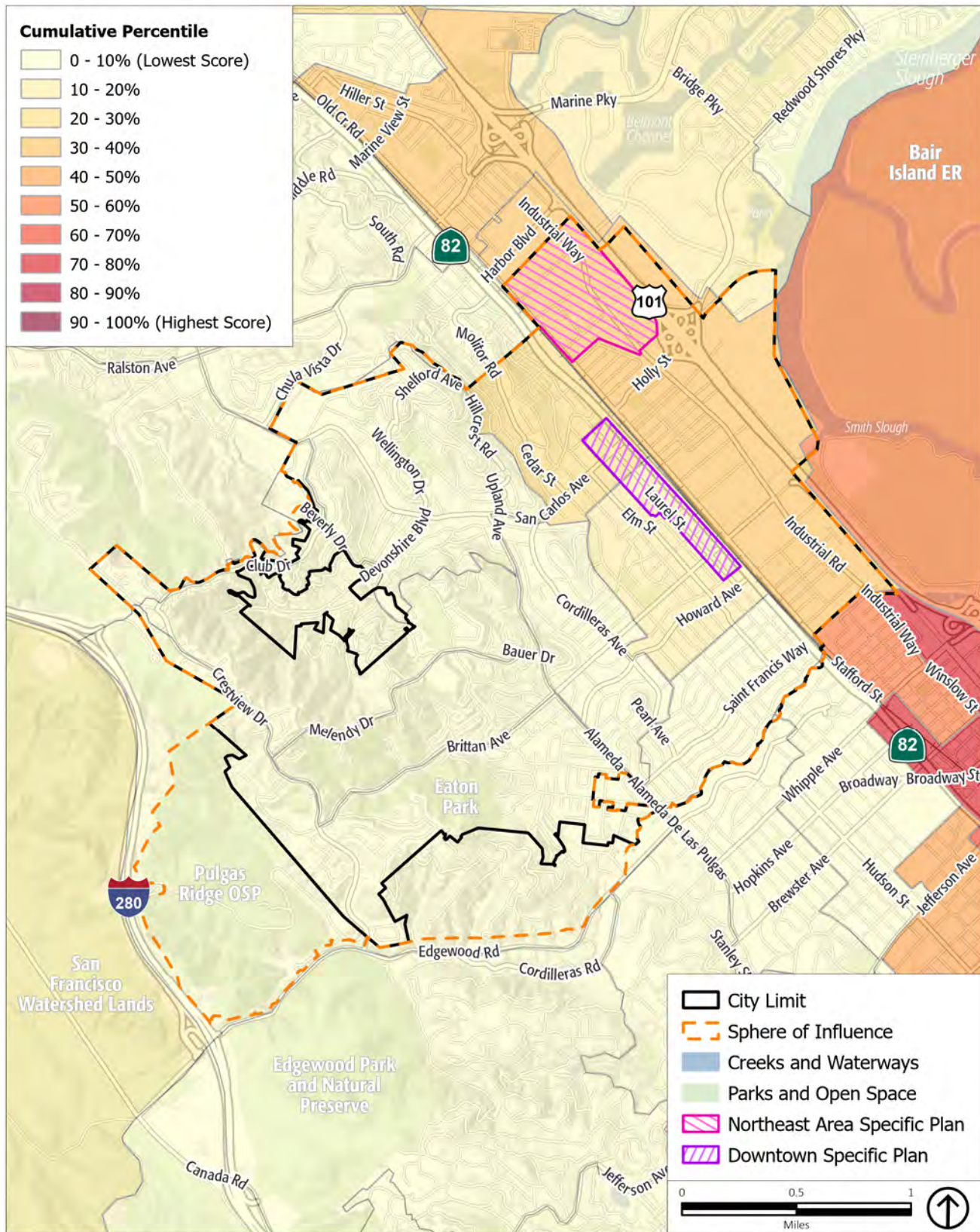


Source: Bay Area Air Quality Management District, 2024; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.2-1  
BAAQMD Overburdened Communities Map



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Source: Office of Environmental Health Hazard Assessment, 2024; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.2-2  
CES4 Indicator - Cumulative Score by Percentile



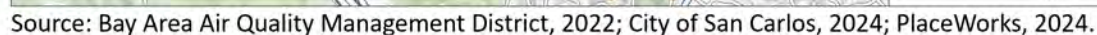
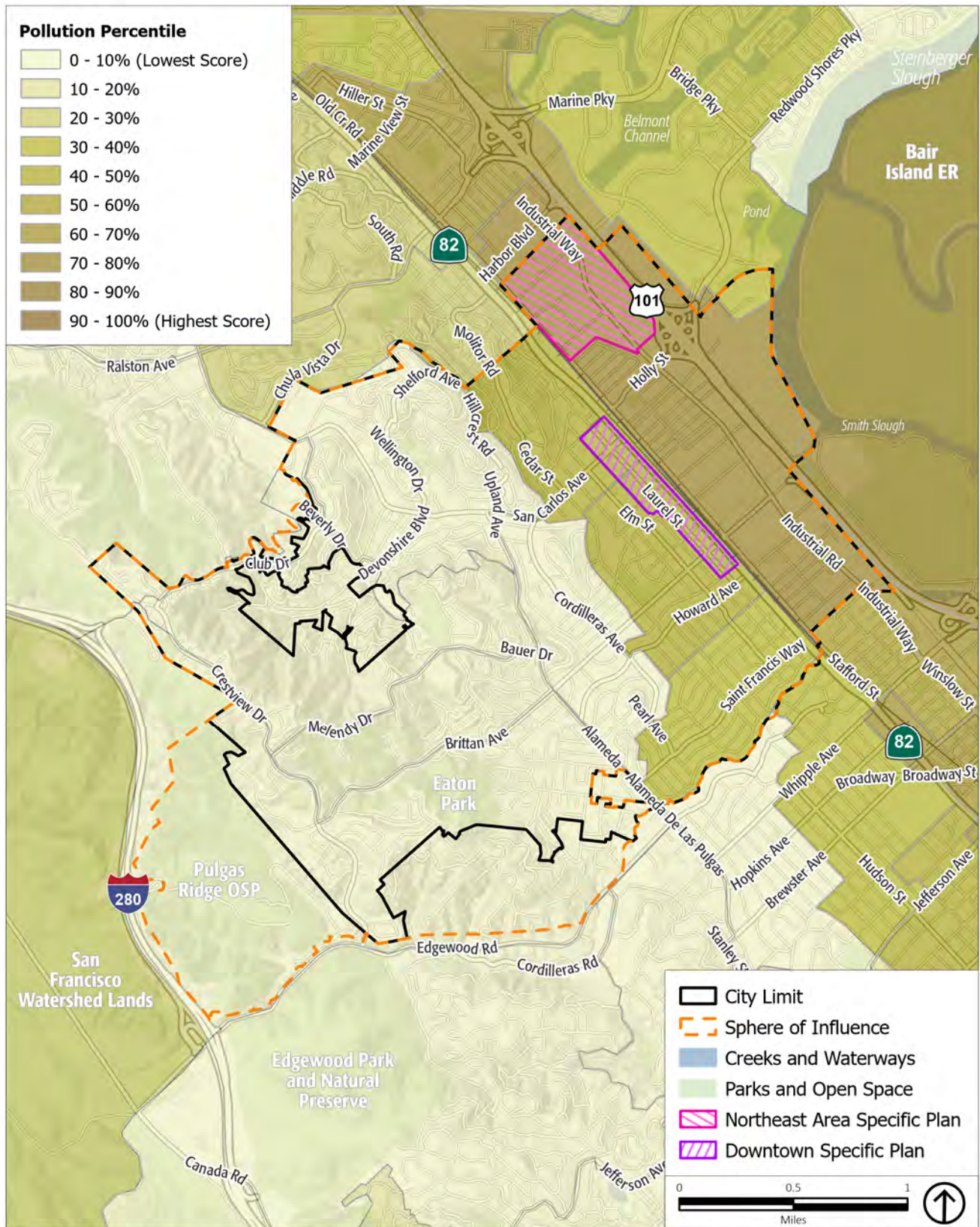


Figure 4.2-3  
BAAQMD Siting Recommendations



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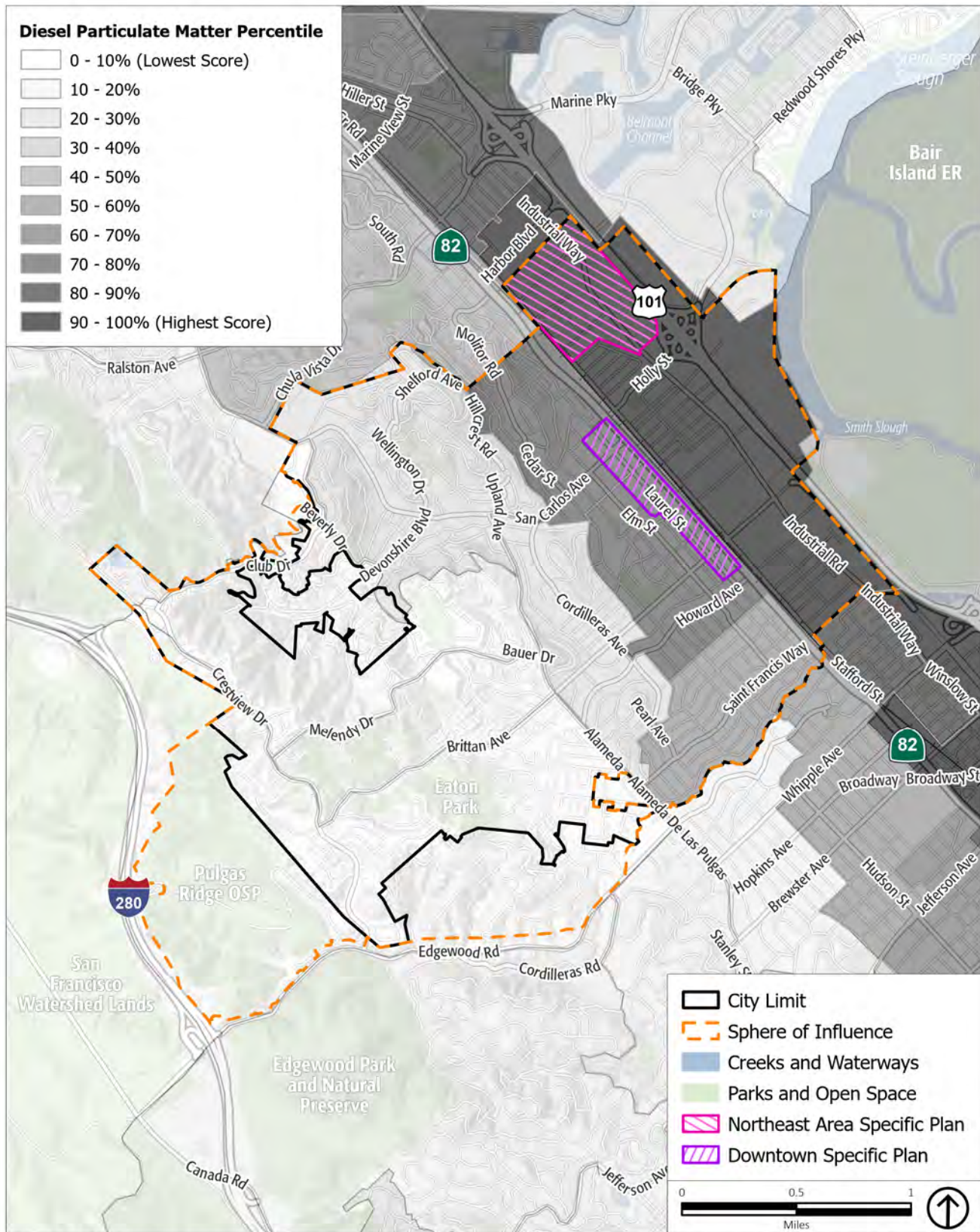


Source: Office of Environmental Health Hazard Assessment, 2024; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.2-4  
CES4 Indicator - Pollution Burden by Percentile



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Source: Office of Environmental Health Hazard Assessment, 2024; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.2-5  
CES4 Indicator - Diesel Particulate Matter by Percentile

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### Existing Emissions

#### *Criteria Air Pollutant Emissions Inventory*

Table 4.2-5, *Existing Regional Criteria Air Pollutant Emissions Inventory, EIR Study Area*, identifies the existing criteria air pollutant emissions inventory using emission rates for year 2024 (baseline conditions). The inventories are based on existing land uses in the EIR Study Area. The year 2024 inventory represents the projected emissions currently generated by existing land uses using the baseline year 2024 emission factors for on-road vehicles.

**TABLE 4.2-5 EXISTING REGIONAL CRITERIA AIR POLLUTANT EMISSIONS INVENTORY, EIR STUDY AREA**

EIR Study Area Criteria Air Pollutant Emissions (pounds per day)				
Emission Source	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>a</sup>	26	168	37	14
Energy <sup>b</sup>	11	211	16	16
Off-road Equipment <sup>c</sup>	144	89	4	3
Consumer Products <sup>d</sup>	586	-	-	-
Total	767	469	57	32

EIR Study Area Criteria Air Pollutant Emissions (tons per year)				
Emission Source	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>a</sup>	5	29	6	2
Energy <sup>b</sup>	2	39	3	3
Off-road Equipment <sup>c</sup>	26	16	1	1
Consumer Products <sup>d</sup>	107	-	-	-
Total	140	84	10	6

**Notes:**

a. On-road transportation VMT is provided by VMT and modeled with EMFAC2021. VMT for the proposed project is based on the “project’s effect” of VMT in the EIR Study Area.

b. Building electricity and natural gas emissions are based on data provided by PG&E, PCE, and CalEEMod User’s Guide for natural gas criteria air pollutant emissions. The energy consumption rates for 2045 were adjusted to reflect the increase in housing units and employment within the EIR Study Area.

c. On-road vehicles and equipment are based on the OFFROAD2021 emissions inventory and include construction equipment and commercial equipment.

d. Household consumer product use based on the emissions factors in the CalEEMod Users Guide Version 2022.1.

Source: PlaceWorks, 2024.

#### *Stationary Sources*

Stationary sources of air pollution—including complex sources such as metal smelting, wastewater treatment plants, and refineries as well as smaller facilities such as diesel generators, gasoline dispensing facilities (GDFs or gas stations), and boilers—are regulated and subject to permit conditions established

by BAAQMD.<sup>36</sup> Permitted stationary sources in the EIR Study Area are shown on Figure 4.2-3, *BAAQMD Siting Recommendations*.

### Odors

Odors are associated with certain manufacturing processes and with some commercial operations (restaurants, etc.) that may be located near residential uses. Nuisance odors are regulated under BAAQMD Regulation 7, *Odorous Substances*, and Regulation 1, Rule 1-301, *Public Nuisance*. Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

## 4.2.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant air quality impact if it 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.
- AQ-5 In combination with past, present, and reasonably foreseeable projects, result in cumulative air quality impacts in the area.

### BAAQMD Plan-Level Significance Criteria

The BAAQMD *CEQA Air Quality Guidelines* were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, greenhouse gas emissions, and environmental justice.

In June 2010, BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. These thresholds are designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. BAAQMD published a

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<sup>36</sup> Permitted facilities are mapped by BAAQMD and can be found at: <https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3>, accessed September 12, 2024.

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new version of the Guidelines dated April 2023.<sup>37</sup> This latest version of the BAAQMD CEQA Guidelines was used to prepare the analysis in this Draft EIR.

### *Clean Air Plan Consistency*

Under its plan-level review criteria, which apply to long-range plans such as the proposed project, BAAQMD recommends a consistency evaluation of the plan with its current Air Quality Management Plan (AQMP) control measures. BAAQMD considers a plan to be consistent with the applicable AQMP, which is currently the 2017 Clean Air Plan, if it is consistent with below considerations:

- Does the project support the primary goals of the AQMP?
- Does the project include applicable control measures from the AQMP?
- Does the project disrupt or hinder implementation of any AQMP control measure?
- Does the project result in VMT growth that is equal to or less than the projected population growth?

### *Criteria Air Pollutant Emissions and Precursors*

BAAQMD’s regional significance criteria for projects that exceed the screening thresholds are shown in Table 4.2-6, *BAAQMD Regional (Mass Emissions) Criteria Air Pollutant Significance Thresholds*. Criteria for both the construction and operational phases of the project are shown.

**TABLE 4.2-6 BAAQMD REGIONAL (MASS EMISSIONS) CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS**

Air Pollutant	Construction Phase	Operational Phase	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (Tons/year)
<b>Project-Level</b>			
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (Exhaust)	82	15
PM <sub>2.5</sub>	54 (Exhaust)	54	10
PM <sub>10</sub> and PM <sub>2.5</sub> Fugitive Dust	Best Management Practices	None	None
<b>Plan-Level</b>			
All Criteria Air Pollutants	No Net Increase		

Source: Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed October 11, 2024.

While the proposed project is a local long-range plan, the land use pattern envisioned by the proposed project has regional implications, such as interjurisdictional transportation behavior and jobs-to-housing ratios; therefore, it would have a less-than-significant impact related to air quality if it demonstrates “no net increase” in criteria air pollutants and risks and hazards. To demonstrate no net increase, BAAQMD’s Guidelines require two comparative analyses for the projected future emissions:

<sup>37</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed October 11, 2024.

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- **Scenario 1:** Project to Existing Conditions (base-to-future-year comparison). Compare the existing (base year) emissions with projected future year emissions plus the regional plan's emissions (base year/regional plan comparison).
- **Scenario 2:** Project to Future No Project Conditions (future baseline comparison). Compare projected future year emissions with projected future year emissions plus the regional plan's emissions (no regional plan/regional plan comparison). This scenario isolates changes in emissions due solely to the project since both the scenarios consider emissions reductions from federal and state regulations.

If both comparative analyses demonstrate no net increase in emissions, the air quality and GHG impacts of the regional plan would be less than significant.

### *Health Effects of Criteria Air Pollutants*

If projects exceed the emissions in Table 4.2-6, *BAAQMD Regional (Mass Emissions) Criteria Air Pollutant Significance Thresholds*, emissions would cumulatively contribute to the nonattainment status and would 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.

However, for projects that exceed the emissions in Table 4.2-6, it is speculative 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 SFBAAB would be affected by the health effects cited above. BAAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SFBAAB 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 *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5<sup>th</sup> 502, Case No. S21978 (Friant Ranch).

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 USEPA, the air districts prepare air quality management plans that detail regional programs to attain the AAQS. However, if a project within the EIR Study Area exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until such time the attainment standards are met in the SFBAAB.

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### *Receptor Exposure to Pollutant Concentrations*

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). Under a plan-level review, BAAQMD does not require an evaluation of CO hotspots. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in attainment of the California and National AAQS for CO emissions, and CO concentrations in the SFBAAB have steadily declined. Because CO concentrations have improved, BAAQMD does not require a CO hotspot analysis if the following criteria are met:<sup>38</sup>

- The project is consistent with an applicable congestion management program established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

### *Community Risk and Hazards*

BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and PM<sub>2.5</sub> because emissions of these pollutants can have significant health impacts at the local level. The proposed project would generate TACs and PM<sub>2.5</sub> during construction activities that could elevate concentrations of air pollutants at the nearby receptors. The thresholds for construction-related local community risk and hazard impacts are the same as for project operations. BAAQMD has adopted screening tables for air toxics evaluation during construction.<sup>39</sup> Construction-related TAC and PM<sub>2.5</sub> impacts are addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site and on-site receptors, as applicable.<sup>40,41</sup>

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<sup>38</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed October 11, 2024.

<sup>39</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed October 11, 2024.

<sup>40</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed October 11, 2024.

<sup>41</sup> Bay Area Air Quality Management District, 2017, January 5. Air Quality Standards and Attainment Status. <http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status#thirteen>, accessed October 11, 2024.

### Community Risk and Hazards: Project

Project-level emissions of TACs or PM<sub>2.5</sub> from individual sources that exceed any of the thresholds listed below are considered a potentially significant community health risk in the absence of a qualified community risk reduction plan:

- An excess (i.e., increased) cancer risk level of more than 10 in one million
- Noncancer (i.e., chronic or acute) hazard index greater than 1.0
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m<sup>3</sup>) annual average PM<sub>2.5</sub><sup>42</sup>

### Community Risk and Hazards: Cumulative

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulatively considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the project, exceeds any of the following in the absence of a qualified community risk reduction plan:

- An excess cancer risk level of more than 100 in one million (from all sources)
- Chronic noncancer hazard index (from all local sources) greater than 10.0
- 0.8 µg/m<sup>3</sup> annual average PM<sub>2.5</sub> (from all local sources)<sup>43</sup>

In February 2015, the OEHHA adopted new health risk assessment guidance that includes several efforts to be more protective of children's health. These updated procedures include the use of age sensitivity factors to account for the higher sensitivity of infants and young children to cancer causing chemicals, and age-specific breathing rate.<sup>44</sup>

### *Odor Impacts*

BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. In addition, odors are also regulated under BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*, which states that no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property. Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance. BAAQMD has established odor

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<sup>42</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed October 11, 2024.

<sup>43</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed October 11, 2024.

<sup>44</sup> California Office of Environmental Health Hazard Assessment, February 2015, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>, accessed October 11, 2024.



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screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.<sup>45</sup>

For a plan-level analysis, BAAQMD requires:

- Potential existing and planned locations of odor sources to be identified.
- Policies to reduce odors.

### 4.2.3 IMPACT DISCUSSION

#### Methodology

##### *Emissions Quantification*

This 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 project. BAAQMD has published CEQA Guidelines that provides local governments with guidance for analyzing and mitigating air quality impacts and was used in this analysis. The EIR Study Area's criteria air pollutant emissions inventory includes the following sectors:

- **Transportation:** Transportation emissions forecasts were modeled using emission rates from CARB's EMFAC2021, version 1.0.2 web database. Model runs were based on daily VMT data provided by Kittelson and Associates, Inc. (see Appendix C, *Noise Data*, and Chapter 4.15, *Transportation*, of this Draft EIR) adjusted for the population and employment in the EIR Study Area in year 2024. The VMT provided includes the full trip length for land uses in the EIR Study Area. 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. VMT for the proposed project includes all trip purposes, such as home-based trips, work commute trips, recreational trips, and school-related trips.
- **Energy:** Energy use for residential and nonresidential land uses in the EIR Study Area were modeled using natural gas data provided by PG&E and PCE. Residential energy and non-residential energy forecasts are adjusted for increases in housing units and employment, respectively.
- **Off-road Equipment:** Emission rates from CARB's OFFROAD2021, version 1.0.7, web database were used to estimate criteria air pollutant emissions from light commercial and construction equipment in the EIR Study Area. OFFROAD2021 is a database of equipment use and associated emissions for each county compiled by CARB. Emissions were compiled using OFFROAD2021 for the County of San Mateo for year 2024. In order to determine the percentage of emissions attributable to the city, light commercial equipment is estimated based on employment for the City of San Carlos as a percentage of San Mateo County. Construction equipment use is estimated based on service population for the City of San Carlos and County of San Mateo from data compiled by the US Census. The light

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<sup>45</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed October 11, 2024.



commercial equipment emissions forecast is adjusted for changes in employment in the EIR Study Area. It is assumed that construction emissions for the forecast year would be similar to historical levels but with updated emission rates for 2045. Annual emissions are derived by multiplying daily emissions by 365 days. Agricultural equipment was not evaluated in the EIR Study Area since there were no agricultural land use designations.

- **Area Sources:** Area sources are based on the emission factors from the CalEEMod Users Guide for emissions generated from use of household consumer products and cleaning supplies.

### *Impacts of the Environment on a Project*

BAAQMD's CEQA Guidelines include methodology for jurisdictions wanting to evaluate the potential quantitative impacts from placing sensitive receptors proximate to major air pollutant sources as part of individual projects. For assessing community risk and hazards for siting a new receptor, sources within a 1,000-foot radius of a project site are typically considered. Sources are defined as freeways, high volume roadways, large distribution centers, and permitted sources. For plan-level impact determination such as this EIR on the proposed project, the analysis is limited to whether the plan has policies or overlay zones to reduce impacts.<sup>46</sup> BAAQMD's CEQA Guidelines refers to CARB's *Air Quality and Land Use Handbook* for recommended planning goals, policies, and objectives to avoid or reduce impacts on sensitive receptors, including establishing buffer distances when siting new sensitive receptors near major air pollutant sources.

Buildout under the proposed project could result in siting sensitive uses (e.g., residential) near major sources of emissions (e.g., freeways, industrial uses, etc.). Developing new sensitive land uses near sources of emissions could expose people 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, as determined by the California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4<sup>th</sup> 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 in the impact discussion below.

While it is generally not within the purview of CEQA to analyze impacts of the environment on a project, the proposed project includes policy guidance which would ensure priority of the health of San Carlos residents through enforcement of the SCMC and incorporation of design features to minimize air quality impacts and to achieve appropriate health standards.

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<sup>46</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed October 11, 2024.

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AQ-1	The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.
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The following describes potential air quality impacts of consistency with the AQMP from the implementation of the proposed project.

### Bay Area Clean Air Plan – Criteria Air Pollutants and Precursors

The proposed project plays an important role in local agency project review by linking local planning and individual projects to the *2017 Clean Air Plan*. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration at an early enough stage 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 clean air goals in the Bay Area.

BAAQMD requires a consistency evaluation of a proposed plan with the current AQMP control measures. As previously discussed, BAAQMD considers project consistency with the AQMP in accordance with the following:

- Does the project support the primary goals of the AQP?
- Does the project include applicable control measures from the AQP?
- Does the project disrupt or hinder implementation of any AQP control measures?
- In addition, long-range plans must demonstrate consistency with the projected growth rate of vehicle activity in VMT or vehicle trips under the plan, as follows:
- Is the project VMT or vehicle trip increase less than or equal to the projected population increase?

### Bay Area Air Quality Management District 2017 Clean Air Plan Goals

The primary goals of the 2017 Clean Air Plan are to attain the State and federal AAQS, reduce population exposure and protect public health in the Bay Area, reduce GHG emissions and protect the climate. Furthermore, the 2017 Clean Air Plan lays the groundwork for reducing GHG emissions in the Bay Area to meet the State's 2030 GHG reduction target and the long-term GHG reduction goals.

#### *Attain Air Quality Standards*

BAAQMD's 2017 Clean Air Plan strategy is based on regional population and employment projections in the Bay Area compiled by ABAG, which are based in part on cities' General Plan land use designations. These demographic projections are incorporated into Plan Bay Area. Demographic trends incorporated into Plan Bay Area determine VMT in the Bay Area, which BAAQMD uses to forecast future air quality trends. The 2017 Clean Air Plan is based on data used in Plan Bay Area 2040. The SFBAAB is currently designated a nonattainment area for O<sub>3</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> (State AAQS only).

Plan Bay Area 2040 has since been superseded by Plan Bay Area 2050 as a regional growth projection, as discussed in Chapter 4.13, *Population and Housing*, of this Draft EIR, and the expected buildout under

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the proposed project would not exceed the Plan Bay Area 2050 regional growth projections.<sup>47</sup> In addition, the proposed project would result in an overall decrease in VMT per service population compared to existing conditions (see Table 4.2-9, *Comparison of the Change in Population and VMT in the EIR Study Area*). The Land Use (LU) Element of the proposed project also provides goals, policies, and actions that would serve to minimize potential adverse impacts related to growth in the EIR Study Area (see impact discussion POP-1 in Chapter 4.13). Therefore, implementation of the proposed project would not introduce a substantial unplanned growth in population in the EIR Study Area and the majority of new housing is expected to be on infill parcels.

Thus, the population projections of the proposed project would be consistent with current regional projections. The emissions resulting from future development associated with the proposed project are included in BAAQMD projections, and future development accommodated under the proposed project would not hinder BAAQMD's ability to attain the California or National AAQS. Accordingly, impacts would be *less than significant*.

#### *Reduce Population Exposure and Protect Public Health*

Future development and activities under the proposed project could result in new sources of TACs and PM<sub>2.5</sub>. Stationary sources, including smaller stationary sources associated with residential development (e.g., emergency generators and boilers), are subject to review by BAAQMD as part of the permitting process. Adherence to the BAAQMD permitting regulations would ensure that new stationary sources of TACs do not expose populations to significant health risk. Mobile sources of air toxics (e.g., truck idling) are not regulated directly by BAAQMD. However, residential development associated with the proposed project would not generate substantial truck traffic or idling. Furthermore, individual development projects subject to CEQA would be required to achieve the project-level risk thresholds established by BAAQMD to ensure the sensitive receptor impact resulting from the subject development project would be *less than significant*.

#### *Reduce GHG Emissions and Protect the Climate*

Consistency of the proposed project with State, regional, and local plans adopted for the purpose of reducing GHG emissions are discussed in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR. Future development facilitated by the proposed project would be required to adhere to statewide measures that have been adopted to achieve the GHG reduction targets of SB 32 and AB 1279. The proposed project is consistent with regional strategies for infill development identified in Plan Bay Area 2050. While Impact GHG-1 identifies that the proposed project would increase emissions, the proposed project would result in a decrease in GHG emissions per service population and Impact GHG-2 identifies that the proposed project is consistent with State, regional, and local plans to reduce GHG emissions. Therefore, the proposed project is consistent with the goal of the *2017 Clean Air Plan* to reduce GHG emissions and protect the climate, and the impact would be *less than significant*.

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<sup>47</sup> It should be noted that Plan Bay Area 2040 projections have been superseded by Plan Bay Area 2050 projections, but ABAG/MTC has not made updated projections available at the jurisdiction level, so it is not possible to compare projected growth under the proposed project to Plan Bay Area 2050 projections.

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### 2017 Clean Air Plan Control Measures

Table 4.2-7, *Control Measures from the BAAQMD 2017 Clean Air Plan*, identifies the control measures included in the *2017 Clean Air Plan* that are required by BAAQMD to reduce emissions for a wide range of both stationary and mobile sources. As shown in Table 4.2-7, the proposed project would not conflict with the *2017 Clean Air Plan* and would not hinder BAAQMD from implementing the control measures in the *2017 Clean Air Plan*. Accordingly, this impact would be *less than significant*.

**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
Stationary Source Control Measures	<ul style="list-style-type: none"> <li>SS 1 – Fluid Catalytic Cracking in Refineries</li> <li>SS 2 – Equipment Leaks</li> <li>SS 3 – Cooling Towers</li> <li>SS 4 – Refinery Flares</li> <li>SS 5 – Sulfur Recovery Units</li> <li>SS 6 – Refinery Fuel Gas</li> <li>SS 7 – Sulfuric Acid Plants</li> <li>SS 8 – Sulfur Dioxide from Coke Calcining</li> <li>SS 9 – Enhanced NSR Enforcement for Changes in Crude Slate</li> <li>SS 10 – Petroleum Refining Emissions Tracking</li> <li>SS 11 – Petroleum Refining Facility-Wide Emission Limits</li> <li>SS 12 – Petroleum Refining Climate Impacts Limit</li> <li>SS 13 – Oil and Gas Production, Processing and Storage</li> <li>SS 14 – Methane from Capped Wells</li> <li>SS 15 – Natural Gas Processing and Distribution</li> <li>SS 16 – Basin-Wide Methane Strategy</li> <li>SS 17 – GHG BACT Threshold</li> <li>SS 18 – Basin-Wide Combustion Strategy</li> <li>SS 19 – Portland Cement</li> <li>SS 20 – Air Toxics Risk Cap and Reduction from Existing Facilities</li> <li>SS 21 – New Source Review for Toxics</li> <li>SS 22 – Stationary Gas Turbines</li> <li>SS 23 – Biogas Flares</li> </ul>	<p>Stationary and area sources are regulated directly by BAAQMD; therefore, as the implementing agency, new stationary and area sources within the EIR Study Area would be required to comply with BAAQMD regulations. BAAQMD routinely adopts/revises rules or regulations to implement the stationary source (SS) control measures to reduce stationary source emissions.</p> <p>Future development within the buildout horizon of the proposed project involves typical urban residential and commercial uses that would not include major stationary sources of emissions. Boilers and emergency generators for multi-family residential products would be required to follow BAAQMD’s permitting requirements.</p> <p>Major stationary source are more commonly associated with industrial manufacturing or warehousing. New industrial growth would be limited to the east side area of San Carlos. However, BAAQMD has existing regulations in place to ensure future development would not conflict with the applicable stationary source control measures (i.e., Best Available Control Technology [BACT] and Best Available Control Technology for Toxics [TBACT] requirements for commonly permitted sources subject to New Source Review in the Bay Area). Non-residential land uses may generate small quantities of stationary source emissions during project operation (e.g., emergency generators, dry cleaners, and gasoline dispensing facilities); however, these small-quantity generators would require review by BAAQMD for permitted sources of air toxics, which would ensure consistency with the 2017 Clean Air Plan. Overall, implementation of the proposed project would not hinder the ability of BAAQMD to implement these stationary source control measures.</p>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
	<ul style="list-style-type: none"> <li>SS 24 – Sulfur Content Limits of Liquid Fuels</li> <li>SS 25 – Coatings, Solvents, Lubricants, Sealants and Adhesives</li> <li>SS 26 – Surface Prep and Cleaning Solvent</li> <li>SS 27 – Digital Printing</li> <li>SS 28 – LPG, Propane, Butane</li> <li>SS 29 – Asphaltic Concrete</li> <li>SS 30 – Residential Fan Type Furnaces</li> <li>SS 31 – General Particulate Matter Emission Limitation</li> <li>SS 32 – Emergency Backup Generators</li> <li>SS 33 – Commercial Cooking Equipment</li> <li>SS 34 – Wood Smoke</li> <li>SS 35 – PM from Bulk Material Storage, Handling and Transport, Including Coke and Coal</li> <li>SS 36 – PM from Trackout</li> <li>SS 37 – PM from Asphalt Operations</li> <li>SS 38 – Fugitive Dust</li> <li>SS 39 – Enhanced Air Quality Monitoring</li> <li>SS 40 – Odors</li> </ul>	
Transportation Control Measures	<ul style="list-style-type: none"> <li>TR 1 – Clean Air Teleworking Initiative</li> <li>TR 2 – Trip Reduction Programs</li> <li>TR 3 – Local and Regional Bus Service</li> <li>TR 4 – Local and Regional Rail Service</li> <li>TR 5 – Transit Efficiency and Use</li> <li>TR 6 – Freeway and Arterial Operations</li> <li>TR 7 – Safe Routes to Schools and Safe Routes to Transit</li> <li>TR 8 – Ridesharing, Last-Mile Connection</li> <li>TR 9 – Bicycle and Pedestrian Access and Facilities</li> <li>TR 10 – Land Use Strategies</li> </ul>	<p>Transportation (TR) control measures are strategies to reduce vehicle emissions by reducing vehicle trip frequencies, personal vehicle reliance, vehicle trip distance, and vehicle idling. Although most of the transportation control measures are implemented at the regional level—that is, by MTC or Caltrans—the 2017 Clean Air Plan relies on local communities to assist with implementation of some measures.</p> <p>Future development would be reviewed based on the proposed General Plan goals, policies, and actions. The Land Use (LU) Element, Circulation and Scenic Highways (CSH) Element, and Environmental Management (EM) Element contain the following goals, policies, and actions to expand the pedestrian and bicycle network:</p> <ul style="list-style-type: none"> <li><b>Goal LU-1:</b> Ensure a sustainable land use pattern. <ul style="list-style-type: none"> <li><b>Policy LU-1.2:</b> Encourage development of higher density housing and support additional job growth within the TOD corridor while being sensitive to surrounding uses.</li> </ul> </li> </ul>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
	<ul style="list-style-type: none"> <li>TR 11 – Value Pricing</li> <li>TR 12 – Smart Driving</li> <li>TR 13 – Parking Policies</li> <li>TR 14 – Cars and Light Trucks</li> <li>TR 15 – Public Outreach and Education</li> <li>TR 16 – Indirect Source Review</li> <li>TR 17 – Planes</li> <li>TR 18 – Goods Movement</li> <li>TR 19 – Medium and Heavy Duty Trucks</li> <li>TR 20 – Ocean Going Vessels</li> <li>TR 21 – Commercial Harbor Craft</li> <li>TR 22 – Construction, Freight and Farming Equipment</li> <li>TR 23 – Lawn and Garden Equipment</li> </ul>	<ul style="list-style-type: none"> <li><b>Policy LU-1.3:</b> Ensure that development within the TOD corridor maintains and improves the mobility of people and vehicles along and across the corridor.</li> <li><b>Goal LU-2:</b> Preserve and strengthen Downtown as the civic, cultural and social heart of the city. <ul style="list-style-type: none"> <li><b>Policy LU-2.2:</b> Provide for bicycle and pedestrian safety Downtown.</li> <li><b>Policy LU-2.11:</b> Ensure convenient bicycle and pedestrian access to Downtown from surrounding areas and the TOD corridor.</li> </ul> </li> <li><b>Goal LU-3:</b> Promote connectivity and provide retail and services within walking distance of homes and employment areas. <ul style="list-style-type: none"> <li><b>Policy LU-3.10:</b> Encourage the creation of safe, walkable environments that include elements such as wide, smooth sidewalks, good lighting, safe crosswalks, clear signage, curb bulb-outs, curb cuts, street furniture and trees and traffic-calming measures which allow people of all ages and abilities to exercise and safely access public transportation, community centers and schools and goods and services.</li> <li><b>Policy LU-3.13:</b> Provide for safe and convenient pedestrian and bicycle connections between residential and commercial areas throughout San Carlos.</li> <li><b>Action LU-3.3:</b> Work with SamTrans and other public agencies to provide a public mass transit stop accessible to every home and business in San Carlos.</li> </ul> </li> <li><b>Goal CSH-2:</b> To provide a safe, efficient and aesthetically pleasing circulation network for various transportation modes in addition to the automobile. <ul style="list-style-type: none"> <li><b>Policy CSH-3.3:</b> The City shall support local school district efforts to reduce traffic through programs such as safe routes to school, school pools and school bus/shuttle programs.</li> <li><b>Policy CSH-3.8:</b> The City shall continue to evaluate service levels metrics as provided by the City's Transportation Significance Criteria as adopted November 2024 (Resolution 2024-118). The City recognizes that certain development project(s) may cause these guidelines to be exceeded. The City may approve such development project(s) if specific economic, legal, social, technological, or other benefits outweigh the effects of exceeding the thresholds as set forth in the Transportation Significance Criteria.</li> <li><b>Policy CSH-3.16:</b> The City shall support adequate access to affordable transportation alternatives for people with impaired mobility.</li> <li><b>Action CSH-3.2:</b> The City shall consider adoption of a Transportation Impact Fee for new development to support city-wide Transportation Demand Measures.</li> <li><b>Action CSH-3.4:</b> The City shall encourage City employees to utilize alternative transportation through incentive, ridesharing and guaranteed ride home programs.</li> <li><b>Action CSH-3.5:</b> The City shall coordinate with adjacent communities and responsible agencies to provide an</li> </ul> </li> </ul>

## AIR QUALITY

**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		<p>interconnected system of pedestrian ways, trails, bikeways and transit routes.</p> <ul style="list-style-type: none"> <li>▪ <b>Action CSH-3.9:</b> The City shall support San Mateo City/County Association of Governments (C/CAG) policies on Congestion Management.</li> <li>▪ <b>Goal CSH-7:</b> Contribute to a comprehensive regional trail system for alternative transportation and outdoor recreation purposes.</li> <li>▪ <b>Policy CSH-7.3:</b> Financing and implementation of street modifications for pedestrian or bicycle use shall, whenever possible, be integrated with other related programs, including, but not limited to: street and road projects, street or sidewalk maintenance projects and traffic mitigation programs.</li> <li>▪ <b>Policy CSH-7.4:</b> Support traffic controls that recognize bicycles and pedestrians.</li> <li>▪ <b>Policy CSH-7.6:</b> Support the provision of railcars sufficiently equipped for use by bicyclists.</li> <li>▪ <b>Policy CSH-7.8:</b> The local public path and trail system should be linked with existing private and regional systems and the road system.</li> <li>▪ <b>Action CSH-7.3:</b> Provide continuity to bike routes within the City and interjurisdictionally.</li> <li>▪ <b>Action CSH-7.4:</b> As lands are subdivided, dedication of trail and path easements should be required where appropriate as a part of the City and County's trail and path system. Subdividers should dedicate, construct and maintain trails and paths wherever feasible.</li> <li>▪ <b>Goal EM-11:</b> Promote and expand public and alternative modes of transportation.</li> <li>▪ <b>Policy EM-11.4:</b> Provide an integrated network of bicycle and pedestrian thoroughfares that connects jobs and housing to other city destinations, as recommended in the San Carlos Bicycle and Pedestrian Master Plan.</li> <li>▪ <b>Policy EM-11.9:</b> Coordinate with major employers, neighboring municipalities, and transit agencies and providers to enhance regional transit and shuttle service.</li> <li>▪ <b>Policy EM-11.10:</b> Evaluate and encourage new forms of mass transit.</li> <li>▪ <b>Action EM-11.1:</b> Implement measures in the Climate Action Plan to reduce transportation emissions.</li> <li>▪ <b>Action EM-11.2:</b> Implement traffic calming devices to increase roadway safety for bicycles and pedestrians</li> <li>▪ <b>Action EM-11.4:</b> Coordinate with neighboring jurisdictions, the County and regional agencies to expand bicycle connections to regional destinations.</li> </ul>
Energy and Climate Control Measures	<ul style="list-style-type: none"> <li>▪ EN 1 – Decarbonize Electricity Production</li> <li>▪ EN 2 – Renewable Energy Decrease Electricity Demand</li> </ul>	<p>The energy and climate (EN) control measures are intended to reduce energy use as a means to reducing adverse air quality emissions.</p> <p>Future development would be reviewed based on the proposed General Plan goals, policies, and actions. The Land Use (LU) Element</p>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		<p>and Environmental Management (EM) Element contain the following goals, policies, and action that align with the City’s goals to meet the State’s carbon neutrality initiatives:</p> <ul style="list-style-type: none"> <li>▪ <b>Goal LU-8:</b> Ensure excellence in all development design. <ul style="list-style-type: none"> <li>▪ <b>Policy LU-8.18:</b> Encourage “green building” practices in new development and redevelopment, such as those that make a building more energy efficient and reduces its effect on human health and the environment through better siting, design, construction, maintenance and operation.</li> <li>▪ <b>Policy LU-8.19:</b> Residential and mixed-use structures shall be designed to be compatible with existing structures in the vicinity, minimize obstructing views from adjacent structures or views of community importance, minimize interference with the right or ability to use solar energy and be consistent with the Objective Design Standards.</li> </ul> </li> <li>▪ <b>Goal EM-9:</b> Reduce energy consumed citywide. <ul style="list-style-type: none"> <li>▪ <b>Policy EM-9.1:</b> Provide assistance and support efforts for increased energy efficiency for businesses and residences through a combination of incentives and regulations.</li> <li>▪ <b>Policy EM-9.2:</b> Support on-site generation of energy through alternative forms of energy production such as solar panels, wind turbines and biomass facilities.</li> <li>▪ <b>Action EM-9.3:</b> Review and amend the Zoning Ordinance to identify and reduce barriers to the establishment of on-site energy generators.</li> </ul> </li> </ul> <p>Furthermore, new development would be built to comply with the latest Building Energy Efficiency Standards and CALGreen standards. Therefore, implementation of the proposed project would not conflict with these energy and climate control measures.</p>
Buildings Control Measures	<ul style="list-style-type: none"> <li>▪ BL 1 – Green Buildings</li> <li>▪ BL 2 – Decarbonize Buildings</li> <li>▪ BL 3 – Market-Based Solutions</li> <li>▪ BL 4 – Urban Heat Island Mitigation</li> </ul>	<p>The buildings (BL) control measures focus on working with local governments to facilitate adoption of best GHG emissions control practices and policies.</p> <p>Future development would be reviewed based on the proposed General Plan goals, policies, and actions. The Land Use (LU) Element and Environmental Management (EM) Element contain the following goals, policies, and action to promote energy efficiency and sustainability:</p> <ul style="list-style-type: none"> <li>▪ <b>Goal LU-8:</b> Ensure excellence in all development design. <ul style="list-style-type: none"> <li>▪ <b>Policy LU-8.18:</b> Encourage “green building” practices in new development and redevelopment, such as those that make a building more energy efficient and reduces its effect on human health and the environment through better siting, design, construction, maintenance and operation.</li> </ul> </li> <li>▪ <b>Goal EM-9:</b> Reduce energy consumed citywide. <ul style="list-style-type: none"> <li>▪ <b>Policy EM-9.5:</b> Design all new construction and major remodels of government agency buildings to relevant green building standards.</li> <li>▪ <b>Policy EM-9.6:</b> Encourage new private construction and major remodels to be designed to meet or exceed Green Uniform Building Code requirements.</li> </ul> </li> </ul>



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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		<ul style="list-style-type: none"> <li>▪ <b>Policy EM-9.7:</b> Implement energy efficiency in City-owned and -operated facilities to reduce municipal energy costs and serve as a model for the community.</li> <li>▪ <b>Action EM-9.2:</b> Adopt a Green Building Code as called for in the Climate Action Plan.</li> </ul> <p>In addition, as stated, new developments accommodated under the proposed project would be built to comply with the latest Building Energy Efficiency Standards and CALGreen standards. Thus, the proposed project would not conflict with the buildings control measures.</p>
Agriculture Control Measures	<ul style="list-style-type: none"> <li>▪ AG 1 – Agricultural Guidance and Leadership</li> <li>▪ AG 2 – Dairy Digesters</li> <li>▪ AG 3 – Enteric Fermentation</li> <li>▪ AG 4 – Livestock Waste</li> </ul>	<p>Agricultural practices in the Bay Area account for a small portion, roughly 1.5 percent, of the Bay Area GHG emissions inventory. The GHGs from agriculture include methane and nitrous oxide, in addition to carbon dioxide. While the Agriculture (AG) control measures target larger scale farming practices that are not included in the proposed project, future development sites in the EIR Study Area do not include any that currently host commercial agricultural operations. Therefore, implementation of the proposed project would not conflict with these agriculture control measures.</p>
Natural and Working Lands Control Measures	<ul style="list-style-type: none"> <li>▪ NW 1 – Carbon Sequestration in Rangelands</li> <li>▪ NW 2 – Urban Tree Planting</li> <li>▪ NW 3 – Carbon Sequestration in Wetlands</li> </ul>	<p>The control measures for the natural and working lands sector focus on increasing carbon sequestration on rangelands and wetlands.</p> <p>Future development would be reviewed based on the proposed General Plan goals, policies, and actions. The Land Use (LU) Element and Environmental Management (EM) Element contain the following goals and policies to promote carbon sequestration:</p> <ul style="list-style-type: none"> <li>▪ <b>Goal LU-1:</b> Ensure a sustainable land use pattern. <ul style="list-style-type: none"> <li>▪ <b>Policy LU-1.9:</b> To the extent possible, retain the channels, floodplains, riparian corridors (including suitable setbacks from top of bank) and closely associated upland areas of Cordilleras, Brittan and Pulgas Creeks and their tributaries as significant open space areas. These areas should be maintained in their natural state to function as appropriate open space areas, greenbelt and to support a riparian habitat.</li> </ul> </li> <li>▪ <b>Goal EM-2:</b> Promote healthy streams and riparian corridors. <ul style="list-style-type: none"> <li>▪ <b>Policy EM-2.1:</b> Preserve and enhance riparian areas.</li> <li>▪ <b>Policy EM-2.2:</b> Continue to enforce the City's Riparian Ordinance for all four of the City's creeks (Pulgas, Brittan, Cordilleras and Belmont) and their tributaries.</li> <li>▪ <b>Policy EM-2.4:</b> Restore culverted or buried channels to their natural state wherever feasible.</li> <li>▪ <b>Policy EM-2.5:</b> Promote the establishment of native vegetation and the removal of nonnative invasive plants in riparian areas.</li> <li>▪ <b>Policy EM-2.6:</b> Encourage property owners to replace fallen trees along waterways to maintain an upper canopy of vegetation. The species shall be as approved by the City arborist. Encourage use of trees native to the area.</li> </ul> </li> <li>▪ <b>Goal EM-3:</b> Enhance the urban forest</li> </ul>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		<ul style="list-style-type: none"> <li>▪ <b>Policy EM-3.1:</b> Maintain and expand the urban canopy with special emphasis on protection of heritage trees.</li> <li>▪ <b>Policy EM-3.2:</b> Review and amend the Zoning Ordinance as needed to identify barriers to the effective enhancement of the urban forest and the protection of heritage trees.</li> </ul>
Water Control Measures	<ul style="list-style-type: none"> <li>▪ WR 1 – Limit GHGs from publicly owned treatment works (POTWs)</li> <li>▪ WR 2 – Support Water Conservation</li> </ul>	<p>The 2017 Clean Air Plan includes measures to reduce water use.</p> <p>Future development would be reviewed based on the proposed General Plan goals, policies, and actions. The Environmental Management (EM) Element contains the following goal and policies to increase plumbing water efficiency and reduce landscape water use:</p> <ul style="list-style-type: none"> <li>▪ <b>Goal EM-5:</b> Assure a high level of domestic water quality, promote water conservation and reduce toxics in run-off, including stormwater and the sanitary sewer system.</li> <li>▪ <b>Policy EM-5.3:</b> Promote the conservation and efficient use of water in new and existing residences and by commercial and industrial consumers.</li> <li>▪ <b>Policy EM-5.4:</b> Encourage the use of drought-tolerant plants and efficient watering techniques for all City landscaping.</li> <li>▪ <b>Policy EM-5.5:</b> Recycled water distribution system (purple pipe) should be used for landscaping and other non-potable water uses for residential, commercial and industrial customers, where technically and financially feasible.</li> </ul>
Super-GHG Control Measures	<ul style="list-style-type: none"> <li>▪ SL 1 – Short-Lived Climate Pollutants</li> <li>▪ SL 2 – Guidance for Local Planners</li> <li>▪ SL 3 – GHG Monitoring and Emissions Measurements Network</li> </ul>	<p>Super-GHGs include methane, black carbon and fluorinated gases. The compounds are sometimes referred to as short-lived climate pollutants because their lifetime in the atmosphere is generally fairly short. Measures to reduce super GHGs are addressed on a sector-by-sector basis in the 2017 Clean Air Plan. Through ongoing implementation of the City's CMAP, the City will continue to reduce local GHG emissions, meet State, regional, and local reduction targets, which would ensure implementation of the proposed project would not conflict with these SL control measures.</p> <p>Future development would be reviewed based on the proposed General Plan goals, policies, and actions. The Land Use (LU) Element and Environmental Management (EM) Element contain the following goals, policies, and action for encouraging use of renewable energy and reduction in GHG emissions:</p> <ul style="list-style-type: none"> <li>▪ <b>Goal LU-1:</b> Ensure a sustainable land use pattern. <ul style="list-style-type: none"> <li>▪ <b>Policy LU-1.8:</b> Amend the Zoning Ordinance to address the new multiple family and mixed-use designations as part of the 2023 Focused General Plan Update.</li> </ul> </li> <li>▪ <b>Goal LU-8:</b> Ensure excellence in all development design. <ul style="list-style-type: none"> <li>▪ <b>Policy LU-8.18:</b> Encourage “green building” practices in new development and redevelopment, such as those that make a building more energy efficient and reduces its effect on human health and the environment through better siting, design, construction, maintenance and operation.</li> </ul> </li> <li>▪ <b>Goal EM-9:</b> Reduce energy consumed citywide.</li> </ul>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		<ul style="list-style-type: none"> <li>▪ <b>Policy EM-9.5:</b> Design all new construction and major remodels of government agency buildings to relevant green building standards.</li> <li>▪ <b>Policy EM-9.6:</b> Encourage new private construction and major remodels to be designed to meet or exceed Green Uniform Building Code requirements.</li> <li>▪ <b>Policy EM-9.7:</b> Implement energy efficiency in City-owned and -operated facilities to reduce municipal energy costs and serve as a model for the community.</li> <li>▪ <b>Action EM-9.2:</b> Adopt a Green Building Code as called for in the Climate Action Plan.</li> <li>▪ <b>Goal EM-7:</b> Develop a Greenhouse Gas Emissions Inventory and develop and implement a Climate Action Plan to address San Carlos' contribution to Global Climate Change.</li> <li>▪ <b>Policy EM-7.3:</b> Participate in regional, State and federal efforts to reduce greenhouse gas emissions and mitigate the impacts resulting from climate change.</li> <li>▪ <b>Policy EM-7.6:</b> Support greenhouse gas (GHG) emission reduction measures and climate change resiliency strategies that are cost effective and help create an environmentally sustainable, livable and equitable community. The cost of implementation to the City and the private sector shall be considered prior to the adoption of any GHG reduction strategy.</li> </ul>
Further Study Control Measures	<ul style="list-style-type: none"> <li>▪ FSM SS 1 – Internal Combustion Engines</li> <li>▪ FSM SS 2 – Boilers, Steam Generator and Process Heaters</li> <li>▪ FSM SS 3 – GHG Reductions from Non Cap-and Trade Sources</li> <li>▪ FSM SS 4 – Methane Exemptions from Wastewater Regulation</li> <li>▪ FSM SS 5 – Controlling start-up, shutdown, maintenance, and malfunction (SSMM) Emissions</li> <li>▪ FSM SS 6 – Carbon Pollution Fee</li> <li>▪ FSM SS 7 – Vanishing Oils and Rust Inhibitors</li> <li>▪ FSM SS 8 – Dryers, Ovens and Kilns</li> <li>▪ FSM SS 9 – Omnibus Rulemaking to Achieve Continuous Improvement</li> <li>▪ FSM BL 1 – Space Heating</li> <li>▪ FSM AG 1 – Wineries</li> </ul>	The majority of the further study control measures apply to sources regulated directly by BAAQMD. Because BAAQMD is the implementing agency, new and existing sources of stationary and area sources in the EIR Study Area would be required to comply with these additional further study control measures in the 2017 Clean Air Plan.

Source: PlaceWorks, 2024; Bay Area Air Quality Management District, April 19, 2017, *Final 2017 Clean Air Plan, Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area*, [https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_-\\_proposed-final-cap-vol-1-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-_proposed-final-cap-vol-1-pdf.pdf?la=en), accessed October 11, 2024.

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### *Regional Growth Projections for VMT and Population*

One of the criteria for determining consistency with the current AQMP is comparing the EIR Study Area's VMT growth with its population growth over the same planning horizon. Kittelson and Associates analyzed VMT for the proposed project to estimate the weekday citywide VMT generation for the proposed project in the Baseline Year (2024) and Cumulative Year (2045) with Project scenario. (See Chapter 4.15, *Transportation*, of this Draft EIR for a more detailed VMT discussion.)

Table 4.2-8, *EIR Study Area Projected Generated Total VMT*, displays the VMT estimates resulting from implementation of the proposed project, based on Kittelson and Associates' analysis.

**TABLE 4.2-8 EIR STUDY AREA PROJECT GENERATED TOTAL DAILY VMT**

Category	Baseline Year (2024) <sup>b</sup>	Cumulative Year (2045) <sup>b</sup>	Net Change
Total VMT <sup>a</sup>	773,123	1,335,160	562,037

Notes:

a. The above estimates are drawn directly from the Kittelson and Associates VMT Analysis (2024) prepared for the proposed project, which assumes a total 2045 buildout of 21,560 households. See Table 3-1, *Proposed General Plan 2045 Buildout Projections in the EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR.

b. VMT accounts for passenger vehicles and trucks that have an origin or destination in the City using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under Senate Bill 375 (SB 375), which reduces internal-external and external-internal VMT by 50 percent.

Source: Kittelson and Associates, 2024.

Table 4.2-9, *Comparison of the Change in Population and VMT in the EIR Study Area*, displays the Baseline Year (2024) No Project and Cumulative Year (2045) with Project estimates.

**TABLE 4.2-9 COMPARISON OF THE CHANGE IN POPULATION AND VMT IN THE EIR STUDY AREA**

Category	Base Year (2024)	Cumulative Year (2045)	Change from Existing	
			Change	%
Service Population <sup>a</sup>	51,610	93,770	42,160	82%
Daily VMT <sup>b</sup>	773,123	1,335,160	562,037	73%
VMT/Service Population <sup>c</sup>	15.0	14.2	(0.8)	(5)%

Notes:

a. Service Population accounts for total population and jobs. See Table 3-1, *Proposed General Plan 2045 Buildout Projections in the EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR.

b. Kittelson and Associates, 2024. VMT accounts for passenger vehicles and trucks that have an origin or destination in the City using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under Senate Bill 375 (SB 375), which reduces internal-external and external-internal VMT by 50 percent.

c. Daily per Capita VMT estimates are identified by dividing the Daily VMT estimates by the city population for the corresponding year. It should be noted that the Daily VMT is identified on a per service population basis due to the inter-regional commuting behavior of residents in and around the city, and total Daily VMT estimates include nonresidential VMT.

Source: Kittelson and Associates, PlaceWorks, 2024.

Consistency with BAAQMD's AQMP requires that the VMT increase be proportional to or lower than the projected population increase from the proposed project (e.g., generate the same or less VMT per capita). However, because the proposed project accommodates both residential and nonresidential growth, a better indicator of how efficiently the city is growing can be made by comparing the increase in VMT to the increase in service population (e.g., generate the same or less VMT per service population). This approach is similar to the efficiency metrics for GHG emissions, which consider the total service population when calculating project efficiency.

VMT estimates based on data provided by Kittelson and Associates were calculated for the EIR Study Area. As shown in Table 4.2-9, implementation of the proposed project would result in an increase for daily VMT by 562,037 vehicle miles per day in the EIR Study Area (73 percent increase) and lead to a lower VMT per service population than existing conditions (5 percent decrease). Thus, the proposed project would be consistent with the goals of the 2017 *Clean Air Plan* and this impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## Environmental Justice

BAAQMD's CEQA Air Quality Guidelines also require a consistency analysis of the proposed project with applicable Community Emission Reduction Plans (CERPs) and local environmental justice policies. Environmentally overburdened, underserved, and economically distressed communities may be subject to a higher risk of pollution-related health effects than the general population because they may be exposed to higher pollutant concentrations; they may experience a larger health impact at a given pollutant concentration; or they may be adversely affected by lower pollutant concentrations than the general population. The most critical air pollutant affecting health in the SFBAAB is PM<sub>2.5</sub>, which includes DPM. The burden of breathing unhealthy air is often disproportionately borne by low-income communities and communities of color, many of which are situated closer to busy highways, ports, factories, and other pollution sources.<sup>48</sup>

The Land Use (LU) Element and Environmental Management (EM) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to air quality, including sensitive populations. The following General Plan goals and policies would serve to reduce environmental effects on vulnerable and sensitive populations:

- **Goal LU-8:** Ensure excellence in all development design.
  - **Policy LU-8.4:** Promote pedestrian-scaled design through site planning, building design, finish details and landscaping for all types of development by requiring height and locational transitions between buildings of varied levels that are sensitive to the interrelationships of surrounding uses and structures, especially residential.
- **Goal EM-6:** Support atmospheric conditions that are clean, healthful, provides maximum visibility and meets air quality standards.
  - **Policy EM-6.4:** Implement Bay Area Air Quality Management District (BAAQMD) guidelines that establish minimum screening or buffer distances between emissions sources and sensitive receptors. Exceptions may be made for projects that do not meet the distance requirements, but can be determined compatible with adjacent uses through a project-specific study that determines potential health risk. Mitigation measures shall be required to reduce these risks to acceptable levels.

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<sup>48</sup> Bay Area Air Quality Management District, 2022, *Best Practices for Centering Environmental Justice, Health, and Equity*, <https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-2-environmental-justicefinal-pdf.pdf?la=en>, accessed October 11, 2024.

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- **Policy EM-6.5:** Consider potential impacts from land uses that may emit pollution and/or odors when locating air pollution sources near sensitive receptors. Air pollution sources could include freeways, industrial uses, hazardous materials storage, waste disposal/transfer stations and other similar uses.

As shown above, the proposed project considers measures to reduce emissions and improve community health within Overburdened Communities consistent with BAAQMD's environmental justice goals. Thus, the proposed project would be consistent with BAAQMD's environmental justice goals. As shown in Table 4.2-9, *Comparison of the Change in Population and VMT in the EIR Study Area*, and discussed above, the proposed project would be considered consistent with BAAQMD's AQMP due to the decrease in VMT per service population that would result in 2045. Therefore, the land use pattern envisioned by the proposed project would be considered consistent with BAAQMD's 2017 Clean Air Plan, and this impact would be less than significant.

**Significance without Mitigation:** Less than significant.

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<b>AQ-2</b>	<b>Construction and operation of the proposed project would 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.</b>
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The proposed project guides growth within the EIR Study Area by designating land uses in the proposed land use diagram and through implementation of its goals, policies, and actions. New development would increase air pollutant emissions in the EIR Study Area and contribute to the overall emissions inventory in the SFBAAB. A discussion of health effects associated with air pollutant emissions generated by operational activities is included in Section 4.2.1.1, *Air Pollutants of Concern*.

## Construction

The proposed project would not directly result in construction of any development or infrastructure; however, future development within the buildout horizon of the proposed project would result in short-term construction-related criteria pollutant emissions that have the potential to have an adverse effect on air quality. Although the exact coverage, location, or duration of future construction projects is unknown at the time of preparation of this program-level Draft EIR, short-term criteria pollutant emissions would occur during demolition, site preparation, grading, building construction, paving, and architectural coating activities associated with individual development projects. ROG and NO<sub>x</sub> emissions are primarily associated with gasoline and diesel equipment exhaust and the application of architectural coatings. Fugitive dust emissions (PM<sub>10</sub> and PM<sub>2.5</sub>) are primarily associated with site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT by construction vehicles on- and off-site. Typical construction equipment associated with development and redevelopment projects includes dozers, graders, excavators, loaders, and trucks.

Due to the built-out nature of the EIR Study Area is largely built-out, new development projects would be infill development projects, many of which will likely require the demolition of existing structures to

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make room for newer ones. Fugitive dust emissions would typically be greatest during building demolition, site preparation, and grading activities due to the disturbance of soils and transport of material. NO<sub>x</sub> emissions would also result from the combustion of diesel fuels used to power off-road heavy-duty vehicles and equipment (e.g., backhoes, bulldozers, excavators). The types and quantities of equipment, as well as the duration of construction activities, would be dependent on site-specific conditions for each individual project. Larger development projects would require more equipment over a longer timeframe than that required for redevelopment of a single, residential home.

BAAQMD does not recommend plan-level thresholds of significance for construction emissions; however, BAAQMD does maintain and recommend project-level thresholds of significance for construction emissions that future development projects facilitated by the proposed project would be subject to. In addition, BAAQMD's CEQA Air Quality Guidelines identify and recommend a series of "Basic" measures to control and reduce construction-related fugitive dust emissions. For all projects, BAAQMD recommends implementation of nine Basic Construction Measures to reduce construction fugitive dust and determines a project's fugitive dust impacts during construction to be less than significant if the following Basic Construction Measures are incorporated into project construction:<sup>49</sup>

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to the sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Prior to the commencement of construction activities, individual project proponents shall post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

As previously discussed, a criterion identified by BAAQMD for determining plan-level significance with respect to criteria air pollutants and ozone precursors is determining project consistency with the

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<sup>49</sup> Bay Area Air Quality Management District, April 2023, *Project-Level Air Quality Impacts*, [https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-5-project-air-quality-impacts\\_final.pdf?rev=de582fe349e545989239cbbc0d62c37a&sc\\_lang=enn](https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-5-project-air-quality-impacts_final.pdf?rev=de582fe349e545989239cbbc0d62c37a&sc_lang=enn), accessed October 11, 2024.

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current AQMP control measures, which are intended to ensure the region's achievement and maintenance of attainment of federal and State AAQS. As the SFBAAB is currently designated as a nonattainment area for PM, mitigation would be required to ensure that individual development projects within the buildout horizon of the proposed project would result in less-than-significant construction fugitive dust impacts. Therefore, this impact is considered to be *significant* without mitigation.

**Impact AQ-2.1:** Construction of development projects within the buildout horizon of the proposed project would generate emissions that would exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds and cumulative contribute to the nonattainment designations of the San Francisco Bay Area Air Basin.

**Mitigation Measure AQ-2.1:** Prior to discretionary approval by the City for development projects subject to CEQA (California Environmental Quality Act) review (i.e., discretionary, nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with current BAAQMD methodology for assessing air quality impacts identified in BAAQMD's *CEQA Air Quality Guidelines*. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the City shall require feasible mitigation measures to reduce air quality emissions. Measures shall require implementation of current BAAQMD Best Management Practices for construction-related fugitive dust emissions. At the time of preparation of this EIR, such practices include:

- Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) at least twice daily or as often as needed to control dust emissions.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seedling or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compact layer of wood chips, mulch, or gravel.
- Prior to the commencement of construction activities, individual project proponents shall post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.



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Measures shall be incorporated into appropriate construction documents (e.g., construction management plans) and shall be verified by the City.

**Significance with Mitigation:** Significant and unavoidable. Mitigation Measure AQ-2.1 contains BAAQMD’s “Basic Construction Mitigation Measures Recommended for All Proposed Projects” in the bullet points listed above and contained in BAAQMD’s 2023 CEQA Air Quality Guidelines, which are recommended by BAAQMD to ensure construction fugitive dust emissions are less than significant. As such, fugitive dust emissions would be reduced with implementation of Mitigation Measure AQ-2.1. While Mitigation Measure AQ-2.1 has the potential to reduce construction emissions, potential future development projects (individually or cumulatively) could still exceed the BAAQMD significance thresholds for construction. Therefore, implementation of the proposed project could result in *significant and unavoidable* construction-related regional air impacts from construction equipment exhaust. This finding does not preclude a finding of less-than-significant impacts at the project level.

## Operation

Operational (long-term) activities associated with future development within the buildout horizon of the proposed project could generate a substantial increase in long-term criteria air pollutant emissions from existing conditions that could exceed BAAQMD’s regional significance thresholds and cumulatively contribute to the nonattainment designations of the SFBAAB.

Implementation of the proposed project would result in direct and indirect criteria air pollutant emissions from transportation, energy (e.g., natural gas use), and area sources (e.g., aerosols and landscaping equipment). Mobile-source criteria air pollutant emissions are based on the traffic analysis conducted by Kittelson and Associates for this EIR. The emissions forecast for the EIR Study Area under the proposed project compared to existing conditions (with 2045 emissions rates) is shown in Table 4.2-10, *Proposed Project Criteria Air Pollutant Emissions Forecast (Scenario 1, Comparison to Existing Conditions)*. This is “Scenario 1” as required by BAAQMD and explained under the “BAAQMD Significance Criteria” subheading in Section 4.2.2, *Standards of Significance*.

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**TABLE 4.2-10 PROPOSED PROJECT CRITERIA AIR POLLUTANT EMISSIONS FORECAST (SCENARIO 1, COMPARISON TO EXISTING CONDITIONS)**

Year	Criteria Air Pollutants (Tons/Year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Existing Land Uses – Year 2024</b>				
On-Road Transportation	5	29	6	2
Energy	2	39	3	3
Off-road Equipment	26	16	1	1
Consumer Products	107	-	-	-
Total Existing Land Uses (tons/year)	140	84	10	6
<b>Proposed Land Use Plan – Year 2045 Total Buildout</b>				
On-Road Transportation	4	19	11	4
Energy	4	66	5	5
Off-road Equipment	54	36	1	1
Consumer Products	187	-	-	-
Proposed Land Uses Total (tons/year)	248	121	17	9
<b>Change in Emissions from Existing Land Uses (Year 2045)</b>				
On-Road Transportation	(1)	(10)	4	1
Energy	1	28	2	2
Off-road Equipment	28	20	0	0
Consumer Products	80	-	-	-
Net Change from Existing Land Uses (Year 2045)	108	37	7	3
<b>BAAQMD Threshold (Tons/Year)</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>10</b>
Exceeds BAAQMD Threshold?	Yes	Yes	No	No

Note: Numbers may not sum due to rounding.

Source: PlaceWorks, 2024. See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

As shown in Table 4.2-10, implementation of the proposed project 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 development allowed under the proposed project, as well as an estimate of population and employment in the EIR Study Area in the 2045 horizon year. Therefore, future development projects would generate operational (long-term) air pollutant emissions that exceed BAAQMD's regional significance thresholds for ROG and NO<sub>x</sub> in 2045. Emissions of ROG and NO<sub>x</sub> that exceed the BAAQMD regional threshold would cumulatively contribute to the O<sub>3</sub> nonattainment designation of the SFBAAB. Emissions of PM<sub>10</sub> that exceed BAAQMD's regional significance thresholds would cumulatively contribute to the particulate matter (PM<sub>10</sub>) nonattainment designations of the SFBAAB.

As shown in Table 4.2-11, *Net Change in Regional Criteria Air Pollutant Emissions Forecast (Scenario 2, Comparison to Future No Project Conditions)*, compared to existing baseline year conditions, all criteria air pollutant emissions are projected to increase from current levels due to growth associated within the

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city through 2045. Net operational (long-term) emissions for ROG and NO<sub>x</sub> would remain above the BAAQMD significance thresholds through 2045 without the proposed project, largely due to the increase in household consumer products used in residential development; ongoing use of offroad equipment for landscaping, commercial operations, and construction; and natural gas use for space and water heating. It should be noted that the City adopted Ordinance No. 1588 in 2022 to require most new development to be all-electric, precluding the installation of new natural gas plumbing; however, there are exceptions for specific project conditions and types, and for additions and alterations. Because the extent of implementation of this ordinance is not known through 2045, it was not accounted for in the energy source emissions calculations prepared for this analysis. This is “Scenario 2” as required by BAAQMD and explained under the “BAAQMD Significance Criteria” subheading in Section 4.2.2, *Standards of Significance*.

**TABLE 4.2-11 NET CHANGE IN REGIONAL CRITERIA AIR POLLUTANT EMISSIONS FORECAST (SCENARIO 2, COMPARISON TO FUTURE NO PROJECT CONDITIONS)**

Year	Criteria Air Pollutants (Tons/Year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Existing Land Uses – Year 2045</b>				
On-Road Transportation	3	15	9	3
Energy	4	66	5	5
Off-road Equipment	54	36	1	1
Consumer Products	187	-	-	-
Existing Baseline Land Uses Total	247	118	15	9
<b>Proposed Project Land Use – Year 2045</b>				
On-Road Transportation	4	19	11	4
Energy	4	66	5	5
Off-road Equipment	54	36	1	1
Consumer Products	187	-	-	-
Proposed Land Uses Total	248	121	17	9
<b>Change in Emissions from Existing Baseline</b>				
On-Road Transportation	1	4	2	1
Energy	0	0	0	0
Off-road Equipment	0	0	0	0
Consumer Products	0	0	0	0
Net Change from Existing Baseline	1	4	2	1
<b>BAAQMD Threshold (Tons/Year)</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>10</b>
Exceeds BAAQMD Threshold?	No	No	No	No

Notes: Numbers may not add up due to rounding. VOC = volatile organic compounds; NO<sub>x</sub> = nitrous oxides; PM<sub>10</sub> = particulate matter (aerodynamic diameter of 10 micrometers or less); PM<sub>2.5</sub> = particulate matter (aerodynamic diameter of 2.5 micrometers or less).

Source: PlaceWorks, 2024. See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

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As shown in Table 4.2-11, with the proposed project, operational emissions in 2045 would be below the BAAQMD significance thresholds. Therefore, implementation of the proposed project would result in *less-than-significant* long-term regional air quality impacts.

### *Consistency with AQMP Control Measures*

As previously mentioned, BAAQMD's plan-level guidance does not require an emissions inventory of criteria air pollutants for plan-level analysis; however, BAAQMD recommends that one method used for determining plan-level impact significance is to analyze the proposed plan's consistency with the current AQMP control measures. As discussed in Table 4.2-7, *Control Measures from the BAAQMD 2017 Clean Air Plan*, the proposed project would be consistent with the applicable 2017 Clean Air Plan control measures. As such, the proposed project would be consistent with the current AQMP control measures, and this impact would be *less than significant*.

### *Proposed Plan VMT and Population Growth*

As previously mentioned, BAAQMD's plan-level guidance does not require an emissions inventory of criteria air pollutants for plan-level analysis; however, BAAQMD recommends that the second method for determining plan-level impact significance is to analyze the proposed plan's projected VMT growth versus its projected population growth from existing conditions through its planning horizon year (2045). If a proposed plan's projected VMT growth outpaces its projected population growth, then that proposed plan would result in a cumulatively considerable net increase in criteria pollutants, and this impact would be potentially significant. As discussed in impact discussion AQ-1, the daily per service population VMT facilitated by the proposed project would constitute an approximately 5 percent decrease through 2045. Therefore, the forecasted VMT growth would not outpace the forecasted population growth facilitated by the proposed project. As such, this impact would be *less than significant*.

Growth within the EIR Study Area would cumulatively contribute to operational (long-term) regional criteria air pollutant emissions impacts. However, the Circulation and Scenic Highways (CSH) Element and Environmental Management (EM) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to air quality, including operational phase (long-term) emissions. The following General Plan goals and policies would serve to minimize potential adverse impacts related to these long-term, regional criteria air pollutant emissions:

- **Goal CSH-2:** To provide a safe, efficient and aesthetically pleasing circulation network for various transportation modes in addition to the automobile.
  - **Policy CSH-2.3:** Access to public transportation facilities should be convenient and designed to encourage use of public transit.
- **Goal CSH-3:** Maintain a street and highway system which accommodates future growth while maintaining acceptable levels of service.
  - **Policy CSH-3.3:** Support the incorporation of Transportation Demand Measures in new development to reduce traffic impacts.

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- **Goal CSH-6:** Integrate transportation and land use.
  - **Policy CSH-6.2:** Support transit-oriented development with mixed, dense land use that reduces the need to travel and that is linked to good transit. The City shall work with local, regional and State representatives to encourage the support and funding of transit oriented development projects.
- **Goal EM-11:** Promote and expand public and alternative modes of transportation.
  - **Policy EM-11.4:** Provide an integrated network of bicycle and pedestrian thoroughfares that connects jobs and housing to other city destinations, as recommended in the San Carlos Bicycle and Pedestrian Master Plan.
  - **Policy EM-11.6:** Encourage employers to incentivize employee use of mass transit and alternative modes of transportation.
  - **Policy EM-11.9:** Coordinate with major employers, neighboring municipalities, transit agencies and providers to enhance regional transit and shuttle service.
  - **Policy EM-11.10:** Evaluate and encourage new forms of mass transit.
  - **Policy EM-11.11:** Amend the Zoning Ordinance to create a Transportation Demand Management (TDM) Ordinance that contains strategies to reduce vehicle trips.
  - **Policy EM-11.12:** Include in the Transportation Demand Management Ordinance a requirement that new office development over a certain size include showers and safe and secure bike racks to encourage employees to bicycle to work.

While BAAQMD rules and the General Plan goals and policies listed above may reduce operation-related (long-term) regional air quality impacts of individual projects accommodated under the proposed project to less than significant, due to the magnitude of development allowed, the projected cumulative emissions associated with future development projects would exceed the threshold. Therefore, implementation of the proposed project would significantly contribute to the nonattainment designations of the SFBAAB, resulting in a *significant* impact.

**Impact AQ-2.2:** Operation of development projects under the proposed project could generate operational emissions that exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds for volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>).

**Mitigation Measure AQ-2.2:** Prior to discretionary approval by the City for development projects subject to California Environmental Quality Act (CEQA) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project operational air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with BAAQMD methodology in assessing air quality impacts identified in BAAQMD's current *CEQA Air Quality Guidelines* at the time that the project is considered.

If operation-related air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the City shall require the project applicant(s) to incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified

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measures shall be included as part of the conditions of approval or a mitigation monitoring and reporting plan adopted for the project as part of the project CEQA review. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following:

- Implementing commute trip reduction programs.
- Unbundling residential parking costs from property costs.
- Expanding bikeway networks.
- Expanding transit network coverage or hours.
- Using cleaner-fueled vehicles.
- Exceeding the current Title 24 Building Envelope Energy Efficiency Standards.
- Establishing on-site renewable energy generation systems.
- Requiring all-electric buildings.
- Replacing gas-powered landscaping equipment with zero-emission alternatives.
- Implementing organics diversion programs.
- Expanding urban tree planting.

**Significance with Mitigation:** Significant and unavoidable. Buildout in accordance with the proposed project could generate long-term emissions that would exceed BAAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the San Francisco Bay Area Air Basin (SFBAAB). Mitigation Measure AQ-2.2, in addition to the proposed project goals and policies, would reduce air pollutant emissions to the extent practicable. The proposed project goals 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 EIR Study Area.

This EIR quantifies the increase in criteria air pollutants emissions in the EIR Study Area. However, at the programmatic level, it is not feasible to quantify the increase in toxic air contaminants (TAC) from stationary sources associated with the proposed project or meaningfully correlate how regional criteria air pollutant emissions above BAAQMD's significance thresholds correlate with basin wide health impacts.

To determine cancer and noncancer health risk, the location, velocity of emissions, meteorology and topography of the area, and locations of receptors are equally important as model parameters as the quantity of TAC emissions. The white paper prepared by the Association of Environmental Professionals' Climate Change Committee, *We Can Model Regional Emissions, But Are the Results Meaningful for CEQA*, describes several of the challenges of quantifying local effects—particularly health risks—for large-scale, regional projects, and these are applicable to both criteria air pollutants and TACs. Similarly, the two amicus briefs filed by the air districts on the Friant Ranch case describe two positions regarding CEQA requirements, modeling feasibility, variables, and reliability of results for determining specific health risks associated with criteria air pollutants. The discussions also include the distinction between criteria air pollutant emissions and TACs with respect to health risks. The following summarizes major points about the infeasibility of assessing health risks of criteria air pollutant emissions and TACs associated with implementation of a general plan. The white paper and amicus briefs are provided in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

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To achieve and maintain air quality standards, BAAQMD has established numerical emission indicators of significance for regional and localized air quality impacts for both construction and operational phases of a local plan or project. The numerical emission indicators are based on the recognition that the air basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health. The thresholds represent the maximum emissions from a plan or project that are expected not to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard. By analyzing the plan's emissions against the thresholds, an EIR assesses whether these emissions directly contribute to any regional or local exceedances of the applicable ambient air quality standards and exposure levels.

BAAQMD currently does not have methodologies that would provide the City with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions. For criteria air pollutants, exceedance of the regional significance thresholds cannot be used to correlate a project to quantifiable health impacts unless emissions are sufficiently high to use a regional model. BAAQMD has not provided the methodology to assess the specific correlation between mass emissions generated and their effect on health (note Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR provides the San Joaquin Valley Air Pollution Control District's amicus brief and South Coast Air Quality Management District's amicus brief).

Ozone concentrations depend on 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. Secondary formation of particulate matter and ozone can occur far from sources as a result of regional transport due to wind and topography (e.g., low-level jet stream). Photochemical modeling depends on all emission sources in the entire domain (i.e., modeling grid). Low resolution and spatial averaging produce "noise" and modeling errors that usually exceed individual source contributions. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California ambient air quality standards, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds.

Current models used in CEQA air quality analyses are designed to estimate potential project construction and operation emissions for defined projects. The estimated emissions are compared to significance thresholds, which are keyed to reducing emissions to levels that will not interfere with the region's ability to attain the health-based standards. This serves to protect public health in the overall region, but there is currently no CEQA methodology to determine the impact of emissions (e.g., pounds per day) on future concentration levels (e.g., parts per million or micrograms per cubic meter) in specific geographic areas. CEQA thresholds, therefore, are not specifically tied to potential health outcomes in the region.

The EIR must provide an analysis that is understandable for decision making and public disclosure. Regional-scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation. Additionally, this type of analysis is not feasible at a

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general plan level because the location of emissions sources and quantity of emissions are not known. However, because cumulative development within the EIR Study Area would exceed the regional significance thresholds, this EIR finds that the proposed project could contribute to an increase in health effects in the basin until the attainment standards are met in the SFBAAB.

In summary, as described above, implementation of the proposed project could generate emissions that would exceed BAAQMD's regional significance thresholds for VOC and NO<sub>x</sub>. The proposed project includes goals and policies to reduce these long-term regional criteria air pollutant emissions. In addition, Mitigation Measure AQ-2.2 requires future development in San Carlos that is subject to CEQA (i.e., is a discretionary project) to prepare and submit a technical assessment evaluating potential project operational air quality impacts to the City of San Carlos for review and approval prior to project approval by the City. Where the technical assessment determines the BAAQMD -adopted thresholds are exceeded, the applicants for new development projects would be required to incorporate mitigation measures to reduce air pollutant emissions during operational activities. Due to the programmatic nature of this EIR, the impact is found to be significant and unavoidable. The identification of this program-level impact does not preclude the finding of less-than-significant impacts for future development projects that meet applicable thresholds of significance. Due to the programmatic nature of the proposed project, no additional mitigating measures are available, and the impact is considered *significant and unavoidable*.

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<b>AQ-3</b>	<b>The proposed project would expose sensitive receptors to substantial pollutant concentrations.</b>
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Implementation of the proposed project would cause or contribute significantly to elevated pollutant concentration levels such that it would expose sensitive receptors to elevated pollutant concentrations. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

### Construction Community Risk and Hazards

Future development projects would temporarily elevate concentrations of TACs and DPM in the vicinity of sensitive land uses during construction activities. Since the details regarding future construction activities are not known at this time due to this analysis being conducted at a program level—including phasing of future individual projects, construction duration and phasing, and preliminary construction equipment—construction emissions are evaluated qualitatively in accordance with BAAQMD's plan-level guidance. Subsequent environmental review of future development projects subject to CEQA would be required to assess potential impacts under BAAQMD's project-level thresholds. However, construction emissions associated with the proposed project could exceed BAAQMD's project level and cumulative significance thresholds for community risk and hazards. As recommended by CARB, applicants for construction within 1,000 feet of residential and other sensitive land uses (e.g., hospitals, nursing homes, and day care centers), as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, are required to prepare construction HRAs in accordance with policies and procedures of the OEHH and BAAQMD to identify and mitigate health risk impacts from construction. The latest OEHH guidelines are required to be applied for the analysis, including age



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sensitivity factors, breathing rates, and body weights appropriate for children ages 0 to 16 years. If the construction HRA shows that the incremental cancer risk exceeds the respective threshold established by BAAQMD—project-level risk of ten in a million in all other areas;  $PM_{2.5}$  emissions that exceed  $0.3 \mu\text{g}/\text{m}^3$ ; or the appropriate noncancer hazard index exceeds 1.0—the applicant would be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks below the respective threshold, including appropriate enforcement mechanisms. Measures to reduce risk may include, but are not limited to:

- Use of construction equipment rated as United States Environmental Protection Agency Tier 4 Interim or higher for equipment of 50 horsepower or more.
- Use of construction equipment fitted with Level 3 Diesel Particulate Filters for all equipment of 50 horsepower or more.

The following proposed project policies from the Environmental Management (EM) Element and Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to air quality, including construction health risks. The following General Plan goals and policies would serve to reduce potential health risks and protect sensitive receptors from poor air quality in the EIR Study Area:

- **Goal EM-6:** Support atmospheric conditions that are clean, healthful, provides maximum visibility and meets air quality standards.
  - **Policy EM-6.3:** Support the reduction of emissions of particulates from wood burning appliances, construction activity, automobiles, trucks and other sources.
  - **Policy EM-6.4:** Implement Bay Area Air Quality Management District (BAAQMD) guidelines that establish minimum screening or buffer distances between emissions sources and sensitive receptors. Exceptions may be made for projects that do not meet the distance requirements, but can be determined compatible with adjacent uses through a project-specific study that determines potential health risk. Mitigation measures shall be required to reduce these risks to acceptable levels.
  - **Policy EM-6.6:** BAAQMD recommended measures to reduce  $PM_{10}$  and exhaust emissions associated with construction shall be applied to new development in San Carlos.
- **Goal ESPS-5:** Protect the community from the harmful effects of hazardous materials.
  - **Policy ESPS-5.11:** Encourage the use of green building practices to reduce potentially hazardous materials in construction materials.

Therefore, with implementation of the General Plan goals and policies, construction-related health risk impacts associated with the proposed project are considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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### Operational

Future development projects could cause or contribute significantly to elevated pollutant concentration levels such that it would expose sensitive receptors to elevated pollutant concentrations. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects. Types of land uses that typically generate substantial quantities of TACs and PM<sub>2.5</sub> include industrial and manufacturing (stationary sources), warehousing land uses that have the potential to generate DPM from onsite equipment, and mobile sources (trucks). While these types of land uses are not prevalent in the EIR Study Area, commercial and retail uses that generate small and medium sized truck trips for deliveries could similarly generate localized substantial concentrations of TACs and PM<sub>2.5</sub>. Additionally, operation of new land uses consistent with the proposed project could generate new sources of criteria air pollutants and TACs in the EIR Study Area associated with CO hotspots. The following describes potential localized operational air quality impacts from implementation of the proposed project.

#### *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 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm. Since CO is produced in the 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.

An overarching goal of the *Plan Bay Area 2050* is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle VMT and associated GHG emissions reductions. As described in impact discussion GHG-2 in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR, the proposed project would be consistent with the overall goals of the *Plan Bay Area 2050*. Additionally, the proposed project would not hinder the capital improvements outlined in C/CAG's CMP. Thus, the proposed project would not conflict with the CMP.

Furthermore, under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact.<sup>50</sup> Implementation of the proposed project would result in hourly traffic increases at intersections across the EIR Study Area largely due to an increase in population and employment through 2045. According to traffic volume data provided by W-Trans (2024), the intersection that would experience the greatest traffic volumes in 2045 would be Industrial Road at Holly Street, with an estimated 50,990 average daily trips (ADT). As an industry standard, the ADT are divided by 10 to identify the estimated peak hour traffic volumes at this intersection. Based on adjusting the ADT to identify the peak hour

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<sup>50</sup> Bay Area Air Quality Management District (BAAQMD), April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed October 11, 2024.

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volumes, the intersection of Industrial Road at Holly Street would experience an estimated 5,099 peak hour vehicle trips. As such, the intersection that would experience the greatest peak hour trips in 2045 would be substantially below BAAQMD's significance criteria of 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—and the proposed project would not be considered to generate a CO hotspot.

Overall, the proposed project would not have the potential to substantially increase CO hotspots at intersections in the EIR Study Area and vicinity. Localized air quality impacts related to mobile-source emissions would therefore be *less than significant*.

### *Operational Community Risk and Hazards*

Common sources of TAC emissions are stationary sources (e.g., dry cleaners, diesel backup generators, and gasoline stations), which are subject to the BAAQMD permit requirements. Future development and activities under the proposed project could result in new sources of TACs and PM<sub>2.5</sub>. Stationary sources, including smaller stationary sources associated with residential development (e.g., emergency generators and boilers), are subject to review by BAAQMD as part of the permitting process. Adherence to the BAAQMD permitting regulations would ensure that new stationary sources of TACs do not expose populations to significant health risk. Mobile sources of air toxics (e.g., truck idling) are not regulated directly by BAAQMD. However, residential development associated with the proposed project would not generate substantial truck traffic or idling. Permitted stationary sources and nonpermitted sources are discussed in greater detail below.

### *Stationary (Permitted) Sources*

Various industrial and commercial processes (e.g., manufacturing, dry cleaning) allowed under the proposed project would be expected to release TACs. TAC emissions generated by stationary and point sources of emissions within the SFBAAB are regulated and controlled by BAAQMD. Land uses that would require a permit from BAAQMD for emissions of TACs include chemical processing facilities, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. Emissions of TACs from stationary sources would be controlled by BAAQMD through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under Regulation 2, New Source Review, as well as Regulation 11, Rule 18, *Reduction of Risk from Air Toxic Emissions at Existing Facilities*. Additionally, Review under New Source Review ensures that stationary source emissions (permitted sources) would be reduced or mitigated below the BAAQMD community risk and hazards thresholds. Though these sources would incrementally contribute to emissions in the EIR Study Area individually, they would be mitigated to the BAAQMD standards.

The Land Use (LU) Element and the Environmental Management (EM) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to air quality, including sensitive receptors. The following General Plan goals and policies would serve to minimize potential adverse impacts on air quality and to sensitive receptors by increasing standards:

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- **Goal LU-9:** Protect and enhance all residential neighborhoods.
  - **Policy LU-9.5:** Require buffering, screening, transitional standards, or other measures for new and expanded multi-family residential, mixed use, and/or commercial/industrial developments adjacent to single-family residential neighborhoods to minimize impacts and compatibility conflicts.
- **Goal EM-6:** Support atmospheric conditions that are clean, healthful, provides maximum visibility and meets air quality standards.
  - **Policy EM-6.5:** Consider potential impacts from land uses that may emit pollution and/or odors when locating air pollution sources near sensitive receptors. Air pollution sources could include freeways, industrial uses, hazardous materials storage, waste disposal/transfer stations and other similar uses.

Though the listed General Plan goals and policies would help reduce exposure of sensitive receptors to pollution, and BAAQMD would ensure that on a project-by-project basis emission achieve their permit thresholds, emissions cannot be determined or modeled until specific development projects are proposed. Therefore, implementation of the proposed project may result in projects that emit TACs and PM<sub>2.5</sub> throughout the EIR Study Area and result in potentially *significant* localized air quality impacts.

### *Nonpermitted Sources*

TACs and PM<sub>2.5</sub> from mobile sources when operating at a property (e.g., truck idling) are regulated by statewide rules and regulations, not by BAAQMD, and have the potential to generate substantial concentrations of air pollutants. The primary mobile source of TACs within the EIR Study Area includes truck idling and use of off-road equipment.

While the land use pattern envisioned by the proposed project does not involve a substantial increase in industrial or trucking facilities, new warehousing operations present the potential to generate substantial DPM and PM<sub>2.5</sub> emissions from off-road cargo-handling equipment use and truck idling. In addition, some warehousing and industrial facilities may include use of transport refrigeration units (TRUs) for cold storage. New land uses in the EIR Study Area that would be permitted under the proposed project that use trucks and TRUs could generate an increase in DPM that would contribute to cancer and noncancer health risk in the SFBAAB. Additionally, these types of facilities could also generate particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) that may 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. In addition, trucks would travel on regional transportation routes through the Bay Area, contributing to near-roadway DPM concentrations.

Buildout projections for the proposed project include an increase in research and development and industrial square footage, which includes life sciences and general light industrial uses. The majority of the areas intended for these uses would be concentrated in the eastern portion of the city. Additionally, existing residences are close to Industrial land use designations (see Figure 3-3, *General Plan Land Use Designations*). However, until specific future development projects are proposed, the associated emissions and concentrations cannot be determined or modeled.

## AIR QUALITY

The Environmental Management (EM) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to air quality, including operational health risks. The following General Plan goals, policies, and action would serve to reduce potential health risks and protect sensitive receptors from poor air quality in the EIR Study Area:

- **Goal EM-6:** Support atmospheric conditions that are clean, healthful, provides maximum visibility and meets air quality standards.
  - **Policy EM-6.4:** Implement Bay Area Air Quality Management District (BAAQMD) guidelines that establish minimum screening or buffer distances between emissions sources and sensitive receptors. Exceptions may be made for projects that do not meet the distance requirements, but can be determined compatible with adjacent uses through a project-specific study that determines potential health risk. Mitigation measures shall be required to reduce these risks to acceptable levels.
- **Goal EM-11:** Promote and expand public and alternative modes of transportation
  - **Policy EM-11.11:** Amend the Zoning Ordinance to create a Transportation Demand Management (TDM) Ordinance that contains strategies to reduce vehicle trips.
  - **Action EM-11.5:** Encourage transit providers to utilize vehicles with low polluting technologies and to reduce or eliminate idling.

The policies listed above would require BAAQMD guidelines for minimum screening or buffer distances between emissions sources and sensitive receptors. Additionally, these policies aim to limit truck idling within the EIR Study Area and overall support the BAAQMD rules to reduce emissions from mobile sources.

Though the proposed project includes policies to reduce air pollutant emissions exposure within Overburdened Communities, the proposed project could result in specific development projects that could emit TACs and PM<sub>2.5</sub>. The emissions associated with these facilities cannot be determined or modeled until specific development projects are proposed. Thus, implementation of the proposed project may result in projects that emit TACs and PM<sub>2.5</sub> in the vicinity of Overburdened Communities and result in potentially significant localized air quality impacts. Without project-specific analysis health risk impacts from nonpermitted sources associated with development of industrial and commercial land uses are considered to be *significant*.

**Impact AQ-3:** Construction emissions associated with future development projects could expose air quality-sensitive receptors to substantial toxic air contaminant concentrations and exceed the Bay Area Air Quality Management District's (BAAQMD) project-level and cumulative significance thresholds.

**Mitigation Measure AQ-3:** Prior to discretionary approval by the City, 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, nursing homes) or Overburdened Community, as measured from the property line of the project site to the property line of the nearest sensitive use, shall submit a health risk assessment

## AIR QUALITY

(HRA) to the City 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 BAAQMD. If the HRA shows that the cumulative and project-level incremental cancer risk, noncancer hazard index, and/or PM<sub>2.5</sub> exceeds the respective threshold, as established by BAAQMD (all areas of the City and Sphere of Influence), the project applicant will be required to identify best available control technologies for toxics (T-BACTs) and appropriate enforcement mechanisms, and demonstrate that they are capable of reducing potential cancer, noncancer risks, and PM<sub>2.5</sub> to an acceptable level. T-BACTs may include but are not limited to:

- Restricting idling on-site beyond Air Toxic Control Measures idling restrictions
- Electrifying warehousing docks
- Requiring use of newer equipment
- Requiring near-zero or zero-emission trucks for a portion of the vehicle fleet based on opening year.
- Truck Electric Vehicle (EV) Capable trailer spaces.
- Restricting off-site truck travel through the creation of truck routes.

T-BACTs identified in the HRA shall be included as part of the conditions of approval or a mitigation monitoring and reporting plan adopted for the project as part of the project CEQA (California Environmental Quality Act) review.

**Significance with Mitigation:** Significant and unavoidable. Future development could result in new sources of toxic air contaminants (TAC) or particulate matter (PM<sub>2.5</sub>) near existing or planned sensitive receptors. Review of development projects by BAAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gas stations) in addition to proposed project goals, policies, and actions would ensure that health risks are minimized. Individual development projects would be required to achieve the incremental risk thresholds established by BAAQMD, and TAC and PM<sub>2.5</sub> project-level impacts would be less than significant. However, these projects could contribute to significant cumulative risk in the Bay Area that could affect sensitive populations and Overburdened Communities. As a result, the proposed project's contribution to cumulative health risk is considered *significant and unavoidable*.

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AQ-4	The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
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## Construction

While odors could be generated during future construction activities associated with future development and activities, the proposed project would not directly result in construction of any development project. Identification of potential impacts to odor receptors resulting from construction-generated odors, such as equipment exhaust, would require project-specific information for future individual land use development projects that is not currently known. Nonetheless, odors are regulated under BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*. Compliance with BAAQMD Regulation 1 would ensure that odor impacts associated with the proposed project are minimized. As previously discussed, consistent with BAAQMD's CEQA Air Quality Guidelines, a plan-level analysis must

## AIR QUALITY

acknowledge odor sources within the EIR Study Area and identify policies, goals, and objectives aimed at reducing potential odor impacts to ensure that potential impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### Operation

According to BAAQMD's *CEQA Air Quality Guidelines*, land uses associated with odor complaints typically include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations such as chemical and other manufacturing. While odors do not themselves present a health risk, they are often considered a nuisance by people who live, work, or otherwise are located near outdoor odor sources.

Future environmental review could be required for future industrial projects listed in BAAQMD's 2022 CEQA Guidelines Table 5-4, *Odor Screening Distances*, to ensure that sensitive land uses are not exposed to nuisance odors. Consequently, review of projects using BAAQMD's odor screening distances is necessary to ensure that odor impacts are minimized. An increase in residential uses would not generate substantial odors that would affect a substantial number of people. During operation, residences could generate odors from cooking. However, odors from cooking are not substantial enough to be considered nuisance odors that would affect a substantial number of people.

The Environmental Management (EM) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to air quality, including odors. The following General Plan goals and policies would serve to minimize impacts related to potential adverse impacts related to odors:

- **Goal EM-6:** Support atmospheric conditions that are clean, healthful, provides maximum visibility and meets air quality standards.
  - **Policy EM-6.5:** Consider potential impacts from land uses that may emit pollution and/or odors when locating air pollution sources near sensitive receptors. Air pollution sources could include freeways, industrial uses, hazardous materials storage, waste disposal/transfer stations and other similar uses.

Compliance with proposed project policies, as well applicable BAAQMD rules and regulations, would prevent odor emissions from adversely affecting a substantial number of people in the EIR Study Area. Furthermore, nuisance odors are regulated under BAAQMD Regulation 7, *Odorous Substances*, which requires abatement of any nuisance generating an odor complaint, and BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*. Compliance with these BAAQMD regulations would ensure that odor impacts associated with the proposed project are minimized. Therefore, this impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## AIR QUALITY

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AQ-5	The proposed project would, in combination with past, present, and reasonably foreseeable projects, result in cumulative air quality impacts in the area.
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### Criteria Air Pollutants

The cumulative area of analysis is the SFBAAB. As identified in Section 4.2.1, *Environmental Setting*, California is divided into air basins for the purpose of managing the air resources of the state on a regional basis based on meteorological and geographic conditions. Similar to GHG emissions impacts, air quality impacts are regional in nature as no single project generates enough emissions that would cause an air basin to be designated as a nonattainment area. Criteria air pollutant emissions generated by cumulative development associated with buildout of the proposed project would exceed BAAQMD's project-level significance thresholds during construction and operation and would contribute to the nonattainment designations of the SFBAAB.

The SFBAAB is currently designated a nonattainment area for O<sub>3</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Therefore, in combination with past, present, and reasonably foreseeable projects elsewhere within the SFBAAB, the proposed project, even with implementation of applicable regulations and identified mitigation measures, would result in *significant and unavoidable* cumulative air quality impacts. These impacts are *significant and unavoidable* and are identified and discussed in impact discussions AQ-2 and AQ-3.

### Toxic Air Contaminants

Buildout of the proposed project would generate new sources of TAC near existing or planned sensitive receptors. Review of development projects by BAAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gasoline dispensing facilities) would ensure that health risks are minimized. Mitigation Measure AQ-3 would ensure mobile sources of TACs not covered by BAAQMD permits are considered during subsequent project-level environmental review by the City of San Carlos. Individual development projects would be required to achieve the incremental risk thresholds established by BAAQMD, and TACs would be less than significant. However, implementation of the proposed project would generate TACs that could contribute to elevated levels in the SFBAAB. While individual projects would achieve the project-level risk threshold of 10 per million, they would nonetheless contribute to the higher levels of cancer risk in the SFBAAB, and therefore result in a cumulatively considerable impact. Therefore, the cumulative contribution to health risk resulting from implementation of the proposed project is *significant and unavoidable*. These impacts are *significant and unavoidable* and are identified and discussed in impact discussions AQ-2 and AQ-3.



## BIOLOGICAL RESOURCES

### 4.3 BIOLOGICAL RESOURCES

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to biological resources, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.3.1 ENVIRONMENTAL SETTING

##### 4.3.1.1 REGULATORY FRAMEWORK

###### Federal Regulations

###### *Federal Endangered Species Act*

The United States Fish and Wildlife Service (USFWS) has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (FESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the FESA. FESA defines “take” as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Title 50, Wildlife and Fisheries, Part 17, Endangered and Threatened Wildlife and Plants, Section 17.3, Definitions, of the Code of Federal Regulations, defines the term “harass” as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering. Furthermore, Section 17.3 defines “harm” as an act that either kills or injures a listed species. By definition, “harm” includes habitat modification or degradation that actually kills or injures a listed species by significantly impairing essential behavior patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering.

Section 10(a) of the FESA establishes a process for obtaining an incidental take permit that authorizes nonfederal entities to incidentally take federally listed wildlife or fish. Incidental take is defined by FESA as take that is “*incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.*” Preparation of a habitat conservation plan (HCP) is required for all Section 10(a) permit applications. The USFWS and National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries Service) have joint authority under the FESA for administering the incidental take program. NOAA Fisheries Service has jurisdiction over anadromous fish species and USFWS has jurisdiction over all other fish and wildlife species.

Section 7 of the FESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the FESA, or result in the destruction or adverse modification of its habitat. Federal agencies are also required to minimize impacts to all listed species resulting from their actions, including issuance of permits or funding. Section

## BIOLOGICAL RESOURCES

7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat (FESA requires that the USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened or endangered). This consultation results in a Biological Opinion prepared by the USFWS stating whether implementation of the habitat Conservation Plan (HCP) will result in jeopardy to any HCP Covered Species or will adversely modify critical habitat and the measures necessary to avoid or minimize effects to listed species.

Although federally listed animals are legally protected from harm no matter where they occur, Section 9 of the FESA provides protection for endangered plants by prohibiting the malicious destruction on federal land and other “take” that violates State law. Protection for plants not living on federal lands is provided by the California Endangered Species Act (CESA).

### *Clean Water Act*

The United States Army Corps of Engineers (USACE) is responsible under Section 404 of the Clean Water Act to regulate the discharge of fill material into waters of the United States. These waters, and their lateral limit, include streams that are tributaries to navigable waters and their adjacent wetlands.<sup>1</sup> The lateral limits of jurisdiction for a non-tidal stream are measured at the line of the ordinary high-water mark<sup>2</sup> or the limit of adjacent wetlands.<sup>3</sup> Any permanent extension of the limits of an existing water of the United States, whether natural or human-made, results in a similar extension of USACE jurisdiction.

Waters of the United States fall into two broad categories: wetlands and other waters. Other waters include waterbodies and watercourses generally lacking plant cover, such as rivers, streams, lakes, springs, ponds, coastal waters, and estuaries. Wetlands are aquatic habitats that support hydrophytic wetland plants and include marshes, wet meadows, seeps, floodplains, basins, and other areas experiencing extended seasonal soil saturation. Seasonally or intermittently inundated features, such as seasonal ponds, ephemeral streams, and tidal marshes, are categorized as wetlands if they have hydric soils and support wetland plant communities. Seasonally inundated waterbodies or watercourses that do not exhibit wetland characteristics are classified as other waters of the United States.

Waters and wetlands that cannot trace a continuous hydrologic connection to a navigable water of the United States are not tributary to waters of the United States. These are termed “isolated wetlands.” Isolated wetlands are jurisdictional when their destruction or degradation can affect interstate or foreign commerce.<sup>4</sup> The USACE may or may not take jurisdiction over isolated wetlands depending on the specific circumstances.

In general, a project proponent must obtain a Section 404 permit from the USACE before placing fill or grading in wetlands or other waters of the United States. Prior to issuing the permit, the USACE is required to consult with the USFWS under Section 7 of the FESA if the project may affect federally listed species.

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<sup>1</sup> Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(a).

<sup>2</sup> Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(e).

<sup>3</sup> Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(b).

<sup>4</sup> Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(a).

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All USACE permits require water quality certification under Section 401 of the Clean Water Act. In the San Francisco Bay Area, this regulatory program is administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB). Project proponents who propose to fill wetlands or other waters of the United States must apply for water quality certification from the San Francisco Bay RWQCB. The San Francisco Bay RWQCB has adopted a policy requiring mitigation for any loss of wetland, streambed, or other jurisdictional area.

### *Migratory Bird Treaty Act*

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term “take” is defined as “to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires.” Most bird species native to North America are covered by this act.

## State Regulations

### *California Endangered Species Act*

The California Department of Fish and Wildlife (CDFW) has jurisdiction over State-listed endangered, threatened, and rare plant and animal species under the California Endangered Species Act (CESA).<sup>5</sup> CESA is similar to the FESA both in process and substance; it is intended to provide additional protection to threatened and endangered species in California. Species may be listed as threatened or endangered under both acts (in which case the provisions of both State and federal laws apply) or under only one act. A candidate species is one that the Fish and Game Commission has formally noticed as being under review by CDFW for addition to the State list. Candidate species are protected by the provisions of CESA.

### *California Environmental Quality Act*

The California Environmental Quality Act (CEQA) applies to “projects” proposed to be undertaken or requiring approval by State and local government agencies. Projects are defined as having the potential to have physical impact on the environment. Under Section 15380 of the CEQA Guidelines, a species not included on any formal list “shall nevertheless be considered rare or endangered if the species can be shown by a local agency to meet the criteria” for listing. With sufficient documentation, a species could be shown to meet the definition of rare or endangered under CEQA and be considered a “de facto” rare or endangered species.

### *California Fish and Game Code*

The CDFW is responsible for enforcing the California Fish and Game Code (CFGC), which contains several protections from “take” for a variety of species. The CDFW also protects streams, water bodies, and riparian corridors through the Streambed Alteration Agreement process under Section 1601 to 1606 of the CFGC. The CFGC stipulates that it is “unlawful to substantially divert or obstruct the natural flow or

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<sup>5</sup> California Fish and Game Code Section 2050 *et seq.*

## BIOLOGICAL RESOURCES

substantially change the bed, channel or bank of any river, stream or lake” without notifying the CDFW, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. CDFW’s jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

The CFGC also lists animal species designated as Fully Protected or Protected, which may not be taken or possessed at any time. The CDFW does not issue licenses or permits for take of these species except for necessary scientific research, habitat restoration/species recovery actions, or live capture and relocation pursuant to a permit for the protection of livestock. Fully protected species are listed in CFGC Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the Fish and Game Code, while protected amphibians and reptiles are listed in Chapter 5, Sections 41 and 42, respectively.

Several provisions in the CFGC provide for the protection of birds and bird nests in active use. Unless the CFGC or its implementing regulations provide otherwise, under California law it is unlawful to:

- Take a bird, mammal, fish, reptile, or amphibian.
- Take, possess, or needlessly destroy the nest or eggs of any bird.
- 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.
- Take or possess any of the thirteen fully protected bird species listed in CFGC Section 3511.
- Take any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).
- Take or possess any migratory non-game bird as designated in the MBTA or any part of such bird, except as provided by rules or regulations adopted by the DOI under the MBTA.
- Take, import, export, possess, purchase, or sell any bird (or products of a bird), listed as an endangered or threatened species under the CESA unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW.

Non-native species, including European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), and rock pigeon (*Columba livia*), are not afforded any protection under the MBTA or CFGC.

### *Porter-Cologne Water Quality Control Act*

Under the Porter-Cologne Water Quality Control Act,<sup>6</sup> the RWQCB is authorized to regulate the discharge of waste that could affect the quality of the State’s waters. The RWQCB asserts jurisdiction over isolated waters and wetlands, as well as waters and wetlands that are regulated by the USACE. Therefore, even if a project does not require a federal permit, it still requires review and approval by the RWQCB. When reviewing applications, the RWQCB focuses on ensuring that projects do not adversely affect the “beneficial uses” associated with waters of the State. In most cases, the RWQCB seeks to protect these beneficial uses by requiring the integration of waste discharge requirements into projects that will

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<sup>6</sup> California Water Code Sections 13000 through 14920.

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require discharge into waters of the State. For most construction projects, the RWQCB requires the use of construction and post-construction best management practices.

### *California Native Plant Protection Act*

The California Native Plant Protection Act of 1977 prohibits importation of rare and endangered plants into California, “take” of rare and endangered plants, and sale of rare and endangered plants. The CESA defers to the California Native Plant Protection Act, which ensures that State-listed plant species are protected when State agencies are involved in projects subject to CEQA. In this case, plants listed as rare under the California Native Plant Protection Act are not protected under the CESA but rather under CEQA.

The California Native Plant Society (CNPS) is a non-governmental conservation organization that has developed a list of plants of special concern in California. The following explains the designations for each plant species:<sup>7</sup>

- **Rank 1A.** Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
- **Rank 1B.** Plants Rare, Threatened, or Endangered in California and Elsewhere
- **Rank 2A.** Plants Presumed Extirpated in California, But Common Elsewhere
- **Rank 2B.** Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
- **Rank 3.** Plants About Which More Information is Needed; A Review List
- **Rank 4.** Plants of Limited Distribution; A Watch List

### *California Natural Communities*

Sensitive natural communities are natural community types considered to be rare or of a “high inventory priority” by the CDFW. Although sensitive natural communities have no legal protective status under FESA or CESA, they are provided some level of consideration under CEQA. Appendix G of the CEQA Guidelines identifies potential impacts on a sensitive natural community as one of six criteria to consider in determining the significance of a proposed project. While no thresholds are established as part of this criterion, it serves as an acknowledgement that sensitive natural communities are an important resource and, depending on their rarity, should be recognized as part of the environmental review process. The level of significance of a project’s impact on any particular sensitive natural community will depend on that natural community’s relative abundance and rarity.

As an example, a discretionary project that has a substantial adverse effect on any riparian habitat, native grassland, valley oak woodland, and/or other sensitive natural community would normally be considered to have a significant effect on the environment. Further loss of a sensitive natural community could be interpreted as substantially diminishing habitat, depending on its relative abundance, quality and degree of past disturbance, and the anticipated impacts to the specific community type.

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<sup>7</sup> California Native Plant Society, CNPS Inventory of Rare Plants, <https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants#:~:text=List%20of%20Plants%20Presumed%20Extinct,is%20currently%20considered%20CRPR%204.>, accessed October 17, 2024.

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### *Oak Woodlands Conservation Act*

The California Oak Woodlands Conservation Act<sup>8</sup> of 2001 acknowledges the importance of private land stewardship to the conservation of the state's valued oak woodlands. This act established the California Oak Woodlands Conservation Program, which aims to conserve oak woodlands existing in the state's working landscapes by providing education and incentives to private landowners. The program provides technical and financial incentives to private landowners to protect and promote biologically functional oak woodlands.

## Regional Regulations

### *McAteer-Petris Act*

In 1969, the McAteer-Petris Act designated the Bay Conservation and Development Commission (BCDC) as the agency responsible for the protection of the San Francisco Bay and its natural resources. BCDC fulfills this mission through the implementation of the *San Francisco Bay Plan* (Bay Plan), an enforceable plan that guides the future protection and use of San Francisco Bay and its shoreline.<sup>9</sup> The Bay Plan includes a range of policies on public access, water quality, project design, and dredging and fill. The Bay Plan also designates shoreline areas that should be reserved for water-related sports, industry, and public recreation; airports; and wildlife areas. The City of San Carlos is within BCDC's jurisdiction. Impacts related to aesthetics, water quality, and recreation are discussed in Chapter 4.1, *Aesthetics*, Chapter 4.9, *Hydrology and Water Quality*, and Chapter 4.12, *Parks and Recreation*, of this Draft EIR, respectively.

### *San Francisco Bay Basin Water Quality Control Plan*

The San Francisco Bay RWQCB adopted a Water Quality Control Plan for the San Francisco Bay Basin (the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan, which includes wetlands in and near the EIR Study Area. It is the RWQCB's master water quality control planning document. The most recent amendments were incorporated into the Basin Plan as of May 2017.<sup>10</sup>

### *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area*

Adopted in 1998, the *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area* covers 28 special status species of plants and animals that occur mainly on serpentine soils and grasslands in the

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<sup>8</sup> California Fish and Game Code Section 1360 et seq.

<sup>9</sup> San Francisco Bay Conservation and Development Commission, 2020, *San Francisco Bay Plan*, <https://bcdcc.ca.gov/resources/plans/san-francisco-bay-plan/>, accessed September 24, 2024.

<sup>10</sup> San Francisco Bay Regional Water Quality Control Board, 2017, *San Francisco Bay Basin Water Quality Control Plan (Basin Plan)*, [https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/planningtmdls/basinplan/web/docs/BP\\_all\\_chapters.pdf](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/docs/BP_all_chapters.pdf), accessed August 8, 2022.

## BIOLOGICAL RESOURCES

San Francisco Bay Area.<sup>11</sup> Due to much of the San Francisco Bay being converted into urban and industrial uses, many species have been forced to move from their historic ranges. The goal of this recovery plan is to delist certain endangered and threatened species, improve the security of several listed species, and ensure long-term conservation of certain species of concern.

### Local Regulations

#### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.3.3, *Impact Discussion*.

#### *City of San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to biological resources as follows:

- Chapter 18.14, *Stream Development and Maintenance (SDM) Overlay District*, regulates developments within 25 feet of top of bank of Cordilleras, Belmont, Brittan, and Pulgas Creeks within the City. All new development shall be set back a minimum twenty-five feet from the top of bank line or such other distance as specified by the Planning and Transportation Commission. Vegetation shall not be cut or removed except for normal maintenance, to facilitate drainage, prevent flooding, and to permit adequate flow of water. Such cutting or removal of vegetation shall be limited to the minimum amount necessary, with special care to avoid removal of vegetation immediately adjacent to the banks of the stream.
- Section 18.18.070, *Trees*, outlines regulations that serve to promote the preservation and development of a healthy, diverse tree canopy in San Carlos. The section defines protected trees, which means any significant or heritage tree, any tree as part of a replacement requirement, an approved development permit or an approved landscaping plan. The provision of trees per square feet of lot coverage varies by district but is required to be a minimum of 24 inches box size unless otherwise specified by the City Arborist and include species restrictions. The section also regulates the maintenance and preservation and prohibits the removal and/or pruning of protected trees.

#### *East Side Innovation District Vision Plan*

Approved in 2021, the East Side Innovation District Vision Plan sets forth clear goals and principles written to achieve the desired character for this area of the City. The East Side Innovation District applies

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<sup>11</sup> United States Fish and Wildlife Service, September 1998, *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area*, <https://www.nps.gov/goga/learn/management/upload/-1491-Recovery-Plan-for-serpentine-soil-species-of-the-San-Francis.pdf>, accessed August 9, 2022.

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to the area east of El Camino Real and west of US Highway 101 and is bounded by Brittan Avenue to the south and Holly Street to the north. Principles of the Vision Plan related to biological resources include encouraging landscaping strategies that provide habitat area and increase the East Side Innovation District's overall tree canopy; conducting further technical analysis to understand the geotechnical, biological, and hydraulic conditions of the creek and where opportunities exist to increase the setback and landscaping provisions; and prioritizing creek restoration as part of future citywide strategic plan.

### 4.3.1.2 EXISTING CONDITIONS

#### Vegetation and Habitat Types

Although native vegetation within San Carlos has been substantially altered, the presence of large areas of undeveloped lands to the west, and the remaining riparian corridors along creeks, contributes to a diverse assemblage of resident and migrant wildlife species. In general, each habitat differs in its relative value to specific species and can be characterized by both vegetation and dependent animal species, although some wildlife species may utilize more than one habitat type.

Existing vegetation and habitat types in the EIR Study area and vicinity are depicted in Figure 4.3-1, *Vegetation and Habitat Types*. The habitat types found within and around San Carlos all provide different ecological functions and value. The more common habitat types are outlined below:

- **Non-vegetated and sparsely vegetated habitat.** Most of the non-vegetated and sparsely vegetated habitat areas are located east of Alameda de las Pulgas.
- **Aquatic habitat.** Aquatic habitat includes streams, ponds, lakes and bay shoreline that provide habitat to a variety of birds, amphibians, fish and mammals.
- **Wetlands.** Wetlands are areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands provide habitat for fish and wildlife and provide stormwater, flood, and water recharge, filtration and purification functions. Seasonal wetlands are areas of prolonged saturation that are dry during the summer months. Wetlands tend to be present near aquatic features such as creeks, lakes or ponds and along the bay shore, but also may be found within seasonal swales or isolated depressions such as a low spot in the ground. Although there are only documented areas of wetlands near the eastern city border, it is likely that these features exist in other areas of the EIR Study Area.
- **Riparian habitats.** Riparian habitat is a distinct plant community found along the margins of creeks and rivers. It has a very high value to wildlife and generally exhibits a rich and diverse animal community. Although mostly urbanized, Pulgas, Brittan, Belmont, and Cordilleras Creeks support areas of riparian habitat.
- **Oak woodland.** Oak woodland habitat consists of patches of several or more mature trees frequently dominated by California coast live oak and valley oak. Some areas of oak woodland habitat also support a dense understory shrub layer of vegetation that includes coyote brush, poison oak, California coffeeberry, Himalayan blackberry and California rose. This habitat is found in small patches in single-family neighborhoods and concentrated in open space and park areas.



## BIOLOGICAL RESOURCES

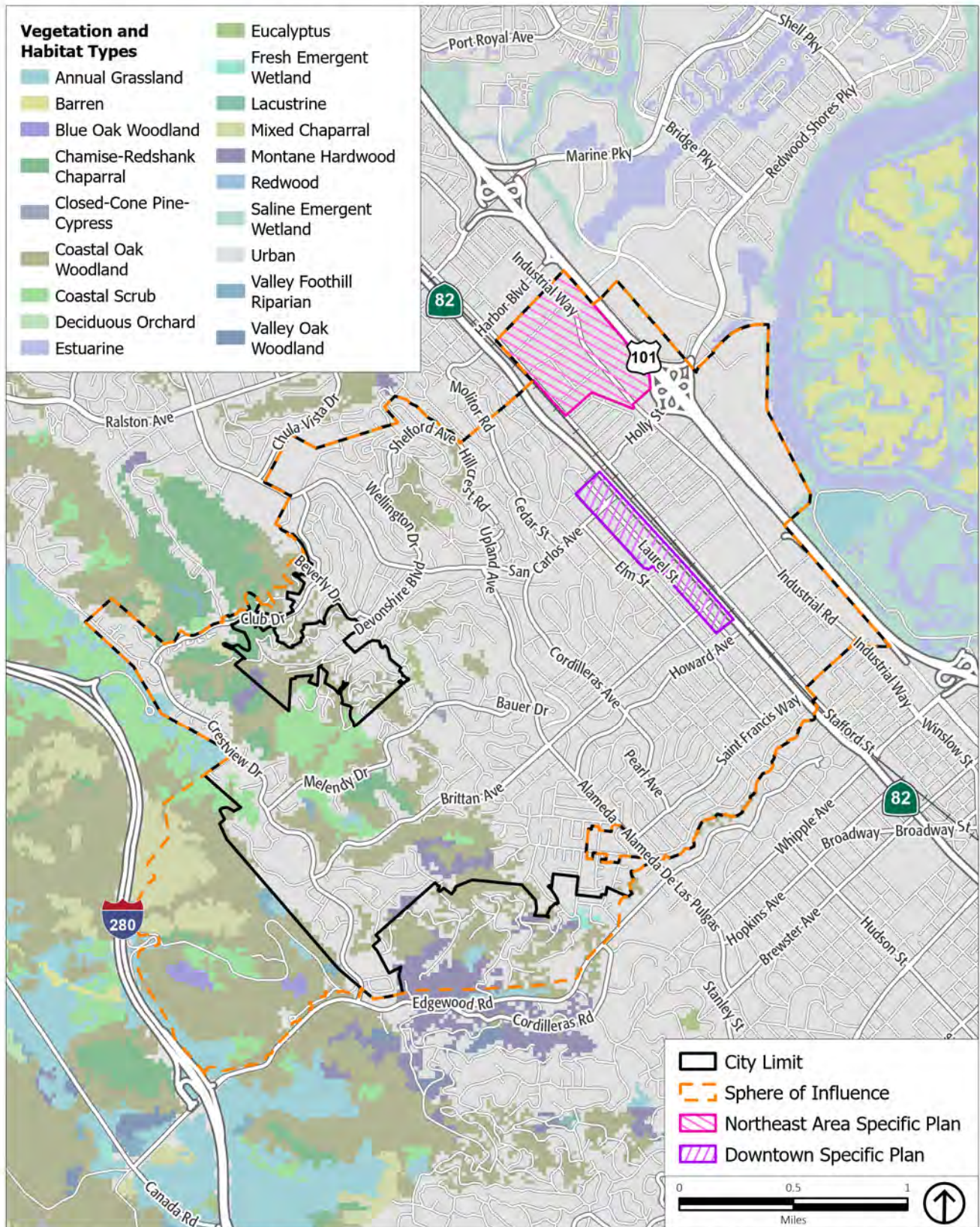


Figure 4.3-1  
Vegetation and Habitat Types

## BIOLOGICAL RESOURCES

- **Annual grassland.** The majority of grassland habitat in San Carlos is rather low-quality grassland dominated by annual, non-native upland grasses and forbs.
- **Scrub.** Scrub habitat in the San Carlos area is characterized by Chamise-Redshank Chapparral. Scrub is found in some of the upland open space and park areas.

### Special-status Species

San Carlos' hilly, densely vegetated open space areas and proximity to the San Francisco Bay provide potential habitat for a variety of sensitive plant or wildlife species. The CNDDDB lists known occurrences of sensitive species based on reported and verified sighting locations of these species. It is not a comprehensive or exhaustive list and sensitive species may exist that are not shown in the database. Locations of CNDDDB plant and animal occurrences in the EIR Study Area and vicinity are depicted in Figure 4.3-2, *Special-Status Animals and Critical Habitat*, and Figure 4.3-3, *Special-Status Plants and Sensitive Natural Communities*, respectively. CNDDDB plant and animal occurrences within the EIR Study Area are summarized in Table 4.3-1 and Table 4.3-2, respectively.

**TABLE 4.3-1 CNDDDB PLANT OCCURRENCES IN THE EIR STUDY AREA**

Scientific Name	Common Name	Federal List	California List	CNPS Rank
<i>Acanthomintha duttonii</i>	San Mateo thorn-mint	Endangered	Endangered	1B.1
<i>Allium peninsulare</i> var. <i>franciscanum</i>	Franciscan onion	None	None	1B.2
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	None	None	1B.2
<i>Arctostaphylos regismontana</i>	Kings Mountain manzanita	None	None	1B.2
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	coastal marsh milk-vetch	None	None	1B.2
<i>Calamagrostis ophitidis</i>	Serpentine Bunchgrass	None	None	None
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes salty bird's-beak	None	None	1B.2
<i>Cirsium fontinale</i> var. <i>fontinale</i>	fountain thistle	Endangered	Endangered	1B.1
<i>Collinsia multicolor</i>	San Francisco collinsia	None	None	1B.2
<i>Dirca occidentalis</i>	western leatherwood	None	None	1B.2
<i>Fritillaria biflora</i> var. <i>ineziana</i>	Hillsborough chocolate lily	None	None	1B.1
<i>Fritillaria liliacea</i>	fragrant fritillary	None	None	1B.2
<i>Hesperolinon congestum</i>	Marin western flax	Threatened	Threatened	1B.1
<i>Lessingia arachnoidea</i>	Crystal Springs lessingia	None	None	1B.2
<i>Malacothamnus arcuatus</i> var. <i>arcuatus</i>	arcuate bushmallow	None	None	1B.2
<i>Monolopia gracilens</i>	woodland woollythreads	None	None	1B.2

## BIOLOGICAL RESOURCES

**TABLE 4.3-1 CNDDDB PLANT OCCURRENCES IN THE EIR STUDY AREA**

Scientific Name	Common Name	Federal List	California List	CNPS Rank
<i>Pentachaeta bellidiflora</i>	white-rayed pentachaeta	Endangered	Endangered	1B.1
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris' popcornflower	None	None	1B.2
<i>Senecio aphanactis</i>	chaparral ragwort	None	None	2B.2
<i>Silene verecunda</i> ssp. <i>verecunda</i>	San Francisco campion	None	None	1B.2
<i>Trifolium hydrophilum</i>	saline clover	None	None	1B.2
<i>Triphysaria floribunda</i>	San Francisco owl's-clover	None	None	1B.2

Notes:

CNDDDB = California Natural Diversity Database

CNPS = California Native Plant Society

CNPS California Rare Plant Rank:

- 1B.1: Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California.
- 1B.2: Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California.
- 2B.2: Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California.

Source: California Natural Diversity Database, 2024; California Department of Fish and Wildlife, 2024 (see Appendix A, *Notice of Preparation and Scoping Comments*, of this Draft EIR).

**TABLE 4.3-2 CNDDDB ANIMAL OCCURRENCES IN THE EIR STUDY AREA**

Scientific Name	Common Name	Federal List	California List	CDFW Rank
<i>Acipenser medirostris</i> pop. 1	green sturgeon - southern DPS	Threatened	None	SSC
<i>Antrozous pallidus</i>	pallid bat	None	None	SSC
<i>Ardea herodias</i>	great blue heron	None	None	None
<i>Asio flammeus</i>	short-eared owl	None	None	SSC
<i>Bombus occidentalis</i>	western bumble bee	None	Candidate Endangered	None
<i>Calicina minor</i>	Edgewood blind harvestman	None	None	None
<i>Charadrius nivosus nivosus</i>	western snowy plover	Threatened	None	SSC
<i>Circus hudsonius</i>	northern harrier	None	None	SSC
<i>Coturnicops noveboracensis</i>	yellow rail	None	None	SSC
<i>Dipodomys venustus venustus</i>	Santa Cruz kangaroo rat	None	None	None
<i>Emys marmorata</i>	western pond turtle	Proposed Threatened	None	SSC
<i>Euphydryas editha bayensis</i>	Bay checkerspot butterfly	Threatened	None	None
<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted	Delisted
<i>Geothlypis trichas sinuosa</i>	saltmarsh common yellowthroat	None	None	SSC
<i>Ricksecker's water scavenger beetle</i>	Hydrochara rickseckeri	None	None	None
<i>Lasiurus cinereus</i>	hoary bat	None	None	None
<i>Laterallus jamaicensis</i>	California black rail	None	Threatened	FP

## BIOLOGICAL RESOURCES

**TABLE 4.3-2 CNDDDB ANIMAL OCCURRENCES IN THE EIR STUDY AREA**

Scientific Name	Common Name	Federal List	California List	CDFW Rank
<i>coturniculus</i>				
<i>Melospiza melodia pusillula</i>	Alameda song sparrow	None	None	SSC
<i>Microcina edgewoodensis</i>	Edgewood Park micro-blind harvestman	None	None	None
<i>Nannopterum auritum</i>	double-crested cormorant	None	None	WL
<i>Neotoma fuscipes annectans</i>	San Francisco dusky-footed woodrat	None	None	SSC
<i>Rana boylei pop. 4</i>	foothill yellow-legged frog - central coast DPS	Threatened	Endangered	
<i>Rana draytonii</i>	California red-legged frog	Threatened	None	SSC
<i>Reithrodontomys raviventris</i>	salt-marsh harvest mouse	Endangered	Endangered	FP
<i>Sorex vagrans halicoetes</i>	salt-marsh wandering shrew	None	None	SSC
<i>Sternula antillarum browni</i>	California least tern	Endangered	Endangered	FP
<i>Thamnophis sirtalis tetrataenia</i>	San Francisco gartersnake	Endangered	Endangered	FP

Notes:

CNDDDB = California Natural Diversity Database

CDFW = California Department of Fish and Wildlife

- SSC: Special Species of Concern

- FP: Fully Protected

Source: California Natural Diversity Database, 2024; California Department of Fish and Wildlife, 2024 (see Appendix A, *Notice of Preparation and Scoping Comments*, of this Draft EIR).

Known occurrences of sensitive species are documented nearby that are not in the CNDDDB. Specifically, the dusky footed woodrat (*Neotoma fuscipes annectans*) is known to be located on, or in the immediate vicinity of an area at the western end of Devonshire Boulevard, and the highest concentrations of nests occur in riparian, coast live oak woodland, and chaparral dominated by chamise and toyon.

In addition, there are additional sensitive plant species identified by the CDFW and USFWS as having the potential to occur in the area. Although there are no documented sitings of these species, the valley and foothill grasslands and seasonal wetland habitat types found in the area could support their existence.

These sensitive species include the following:<sup>12</sup>

- Alkali milk-vetch (*Astragalus tener* var. *tener*)
- San Joaquin spearscale (*Atriplex joaquiniana*)
- Contra Costa goldfields (*Lasthenia conjugens*)
- Large flowered linanthus (*Linanthus grandiflorus*)
- Greene's popcorn flower (*Plagiobothrys greenei*)

<sup>12</sup> City of San Carlos, Winding Way Property Tax Exchange Agreement for Annexation to the City of San Carlos Draft Focused Environmental Impact Report, 2005, page 3-19.



## BIOLOGICAL RESOURCES

- Salinas Valley popcorn flower (*Plagiobothrys uncinatus*)

In addition, coastal salt marsh and wetland habitat near the San Carlos Airport, but outside the EIR Study Area, are known to support sensitive species. Water birds such as the endangered California clapper rail (*Rallus longirostris obsoletus*) and the threatened western snowy plover (*Charadrius alexandrinus nivosus*) could potentially be present in areas adjacent to the San Carlos Airport. There is also potential for the federal endangered salt marsh harvest mouse (*Reithrodontomys raviventris*) to occur in these areas, particularly in places with cordgrass or alkali brush.

The San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), and dusky footed wood rat (*Neotoma fuscipes annectans*) all have potential to occur in open space areas in and around San Carlos. The San Francisco garter snake, a federal Endangered species, typically resides in densely vegetated ponds near exposed hillsides where it can sun itself, feed and find cover in rodent burrows. Often the prey of the San Francisco garter snake, the California red-legged frog, a federal Threatened species, occurs in areas of riparian vegetation with deep, still or slow-moving water. The California tiger salamander, also a federal Endangered species, is found in vernal pools and seasonal ponds in grassland and low foothills. The dusty footed wood rat, a California species of concern, typically is found in woodland areas with dense underbrush. Additionally, native shrubs like the accurate bush mallow could potentially occur in open space areas west of Alameda de las Pulgas.

### Critical Habitat

There are no USFWS-designated critical habitats within the EIR Study Area. However, as shown in Figure 4.3-2, critical habitat for the California red-legged frog lies west of the SOI and critical habitat for the Bay checkerspot butterfly lies south of the SOI. There is a NOAA-designated critical habitat for the green sturgeon east of the EIR Study Area.<sup>13</sup> San Carlos is within NOAA-designated boundaries of Essential Fish Habitat for Chinook salmon and Coho salmon.<sup>14</sup> The NOAA has also designed Essential Fish Habitat for groundfish and coastal pelagic species east of the EIR Study Area.

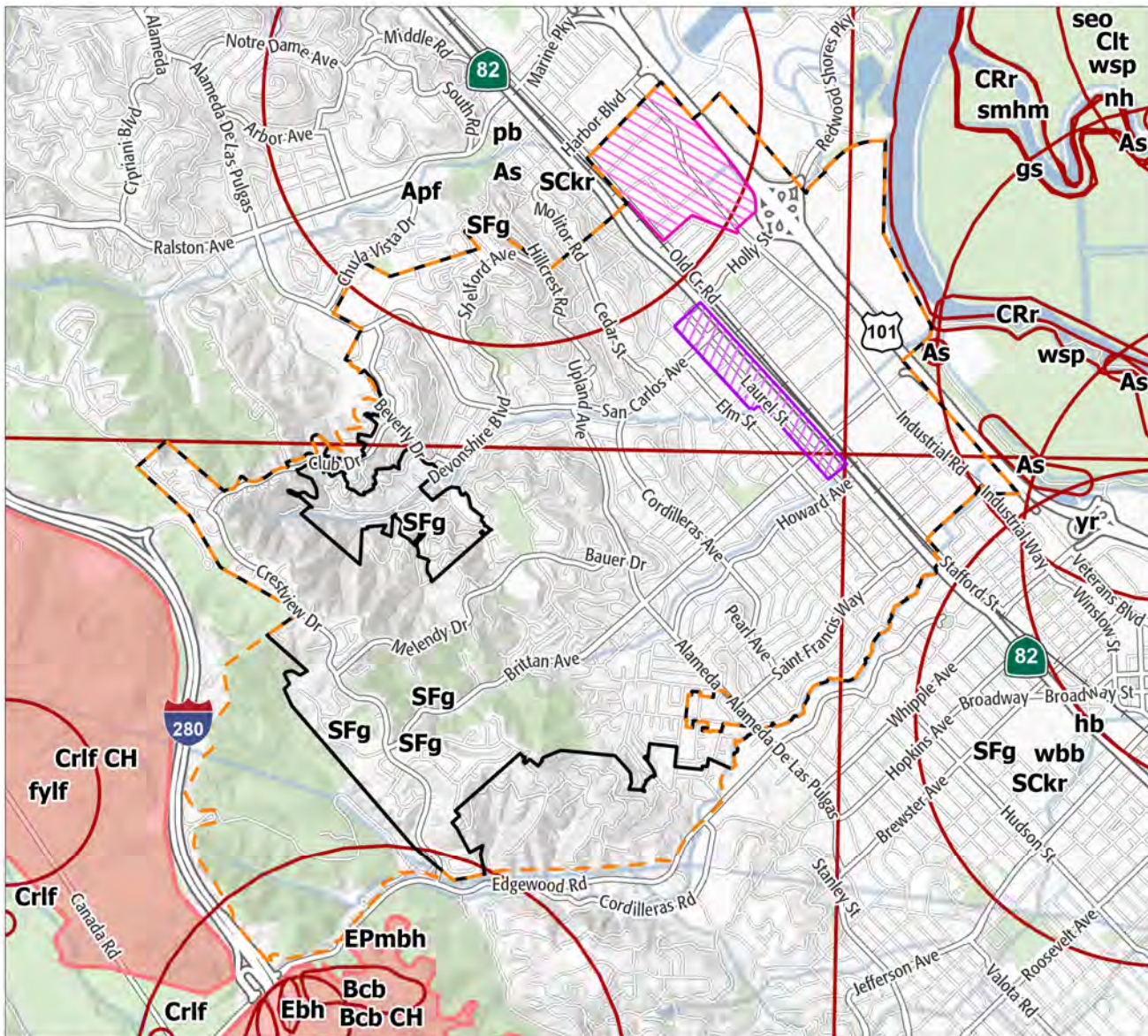
### Sensitive Natural Communities

Sensitive natural communities are community types recognized by CDFW and other agencies because of their rarity. As shown on Figure 4.3-3, the CNDDDB reported known occurrences of serpentine bunchgrass and northern coastal salt marsh in the surrounding area of San Carlos.

<sup>13</sup> National Oceanic and Atmospheric Administration Fisheries, October 2023, National NMFS ESA Critical Habitat Mapper, <https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=68d8df16b39c48fe9f60640692d0e318>, accessed October 17, 2024.

<sup>14</sup> National Oceanic and Atmospheric Administration Fisheries, July 2021, Essential Fish Habitat Mapper, <https://www.habitat.noaa.gov/apps/efhmapper/>, accessed October 17, 2024.

## BIOLOGICAL RESOURCES



### Special Status Animal Species

Apf: American peregrine falcon  
As: Alameda song sparrow  
Bcb: Bay checkerspot butterfly  
Ctl: California least tern  
Crlf: California red-legged frog  
CRr: California Ridgway's rail  
Ebh: Edgewood blind harvestman  
EPmbh: Edgewood Park micro-blind harvestman  
fylf: foothill yellow-legged frog  
gs: green sturgeon

hb: hoary bat  
nh: northern harrier  
pb: pallid bat  
SCKr: Santa Cruz kangaroo rat  
seo: short-eared owl  
SFg: San Francisco gartersnake  
smhm: salt-marsh harvest mouse  
wbb: western bumble bee  
wsp: western snowy plover  
yr: yellow rail

- City Limit
- Sphere of Influence
- Creeks and Waterways
- Parks and Open Space
- Northeast Area Specific Plan
- Downtown Specific Plan
- Special-Status Animal Occurrences
- Critical Habitat (CH)

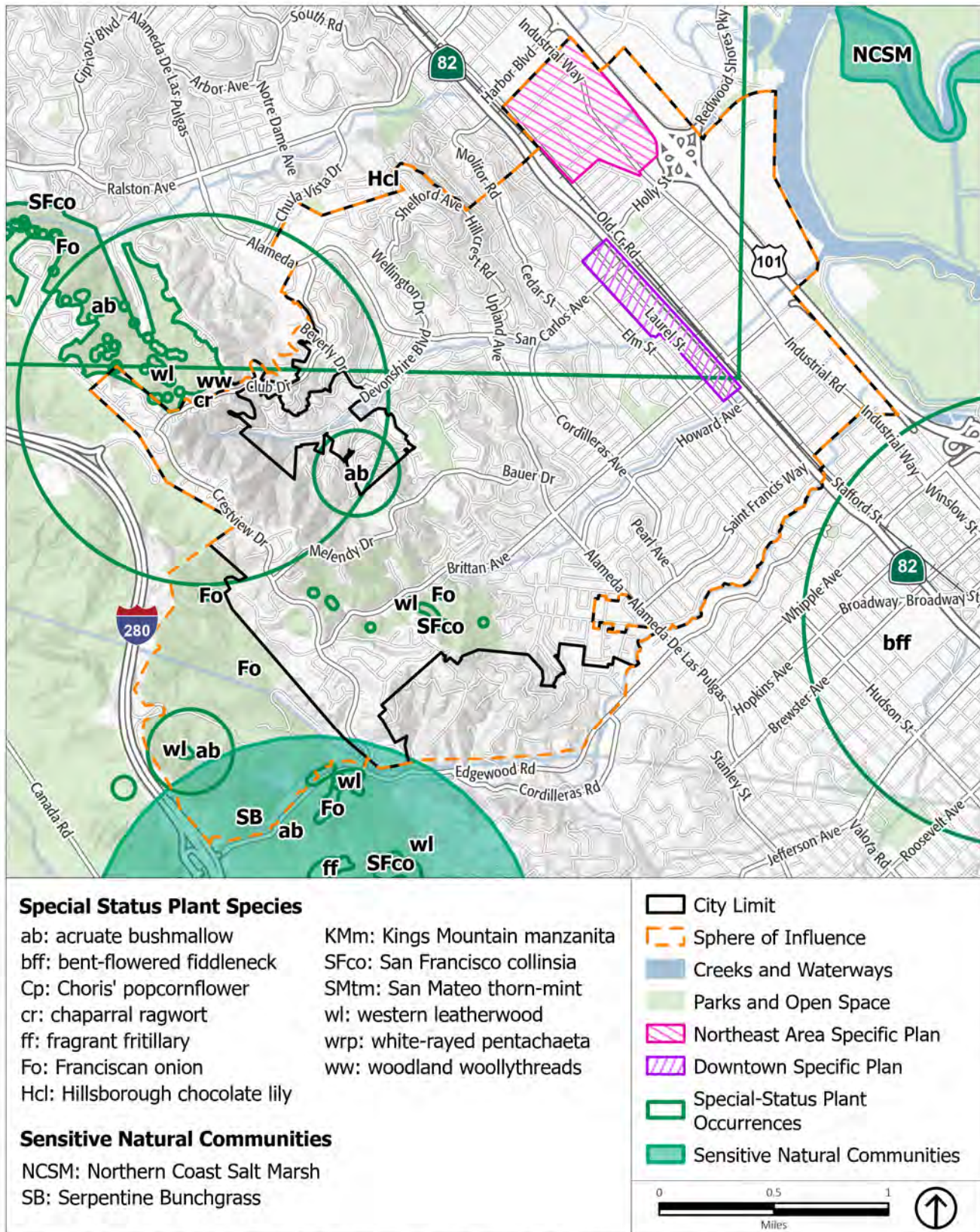


Source: United States Fish and Wildlife Service, 2024; California Natural Diversity Database, 2024; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.3-2  
Special-Status Animals and Critical Habitats



## BIOLOGICAL RESOURCES



Source: California Natural Diversity Database, 2024; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.3-3

## Special-Status Plants and Sensitive Natural Communities

## BIOLOGICAL RESOURCES

### Jurisdictional Waters

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions. The CDFW, USACE, and RWQCB have jurisdiction over modifications to riverbanks, lakes, stream channels and other wetland features, as discussed in Section 4.3.1.1, *Regulatory Framework*.

Pulgas and Brittan Creeks are the two main creeks within San Carlos. The creeks have mostly unhardened channels in the upper reaches and hardened channels in the lower flatlands, where Brittan Creek joins Pulgas Creek via an underground conduit (paralleling El Camino Real). Following the confluence of Pulgas Creek and Brittan Creeks, the combined flow drains into Smith Slough south of Bair Island. Belmont Creek is located at the northern San Carlos boundary in the east side area. Belmont Creek flows into Belmont Slough and O'Neill Slough. Cordilleras Creek, the longest of the four creeks, defines the southern boundary of San Carlos which is shared with Redwood City. Cordilleras Creek, like the combined Pulgas/Brittan Creek, also flows into San Francisco Bay via Smith Slough. Similar to Pulgas and Brittan Creeks, the upper reaches of Cordilleras Creek are mostly unhardened channels. These creeks are "losing creeks," meaning they are not recharged by groundwater. Consequently, they are intermittent and generally flow during the winter wet-weather season and from irrigation runoff during the dry months.

As shown in Figure 4.3-4, *Wetlands*, according to the National Wetlands Inventory, the four creeks in the EIR Study Area have been designated as riverine and freshwater forested/shrub wetland. While the National Wetlands Inventory does identify a freshwater pond designation between El Camino Real and Old County Road, north of Holly Street, this area is developed with housing and does not provide any freshwater pond environment. The waterbodies east of the EIR Study Area have also been designated varying types of wetlands, including estuarine and marine deepwater, estuarine and marine wetland, freshwater wetland, and freshwater pond, and lake.

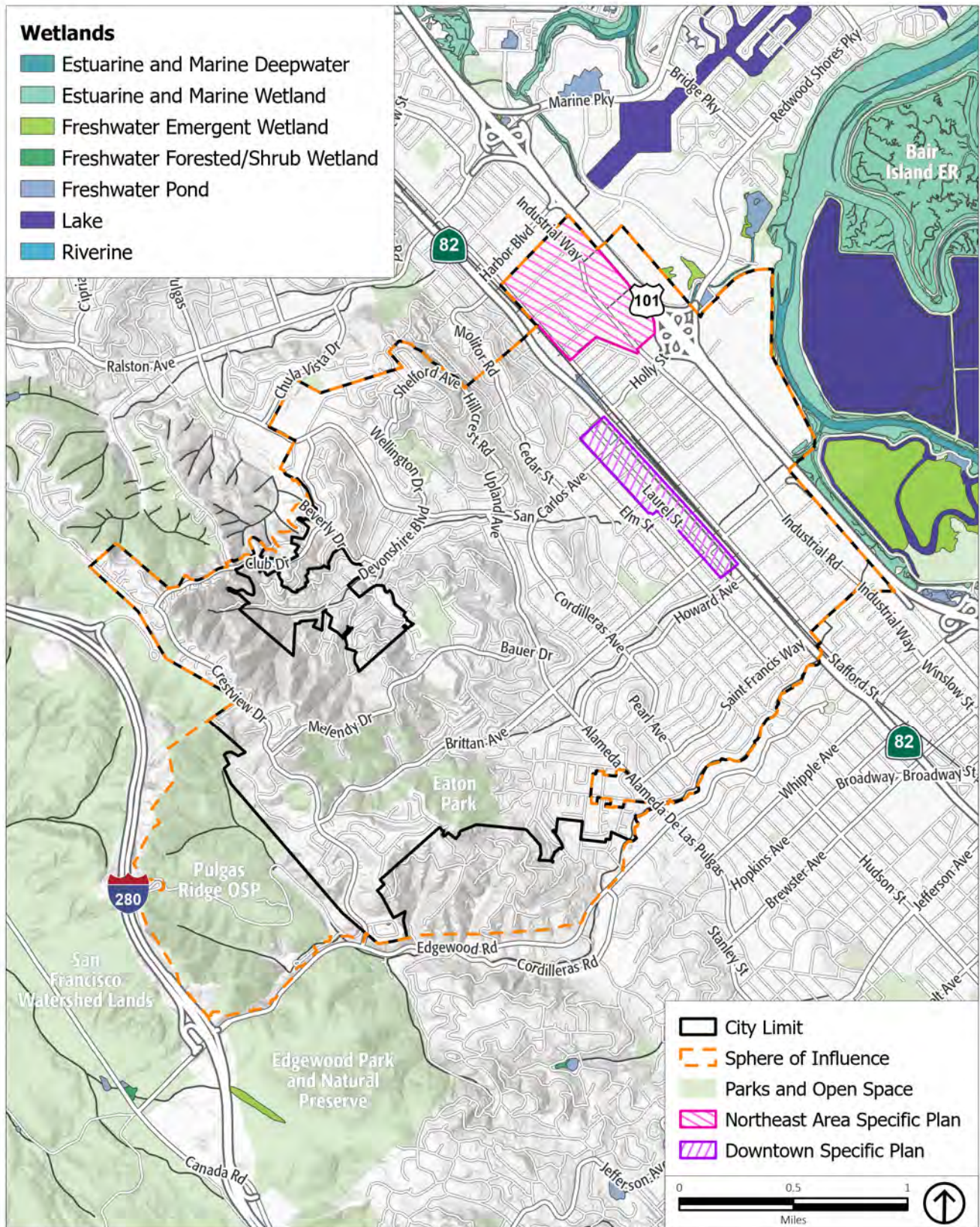
### Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by impassible barriers, large bodies of water, distinct changes in cover, and intensive human activity, among other factors. Urbanization and the resulting fragmentation of undeveloped open space areas can create isolated "islands" of wildlife habitat, separating populations that can lead to genetic isolation and sometimes extirpation. Corridors act as an effective link between populations, allowing for genetic exchange and recruitment of dispersing individual animals where the local carrying capacity, competition and other influences allow.

Wildlife movement through the EIR Study Area is limited due to urbanization of San Carlos. While the EIR Study Area is highly developed, some non-contiguous, vegetated sections along creeks and other areas of open space may provide enough cover to function as a migratory corridor for some species.



## BIOLOGICAL RESOURCES



Source: National Wetlands Inventory, 2024; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.3-4  
Wetlands

## BIOLOGICAL RESOURCES

### Habitat Conservation Plans

The EIR Study is not located within the planning area of an adopted Natural Community Conservation Plan or Habitat Conservation Plan and none are located in the surrounding area of San Carlos.

#### 4.3.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant biological resources impact if it would:

- BIO-1 Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- BIO-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 CDFW or USFWS.
- BIO-3 Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- BIO-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.
- BIO-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- BIO-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.
- BIO-7 In combination with past, present, and reasonably foreseeable projects, result in cumulative biological resource impacts in the area.

#### 4.3.3 IMPACT DISCUSSION

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<b>BIO-1</b>	<b>The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.</b>
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Local, regional, State, and federal regulations provide varying levels of protection for special-status species, depending on a number of factors, including legal protective status, rarity and distribution, the magnitude of the potential impact on essential habitat, specific occurrence and overall population levels, and take of individual plants or animals. Future development projects that could occur under the proposed project would be evaluated for their potential impact on special-status species and other sensitive biological resources, and activities requiring discretionary approvals by local, regional, State, and federal agencies would be subject to regulatory oversight.



## BIOLOGICAL RESOURCES

As indicated in Table 4.3-1, *CNDDDB Plant Occurrences in the EIR Study Area*, seven special-status plant species are reported to occur within or in the vicinity of the EIR Study Area. These consist of Franciscan onion, San Francisco collinsia, western leatherwood, Hillsborough chocolate lily, arcuate bush-mallow, woodland woollythreads, and chaparral ragwort. As indicated in Table 4.3-2, *CNDDDB Animal Occurrences in the EIR Study Area*, seven special-status animal species are reported to occur within or in the vicinity of the EIR Study Area. These consist of pallid bat, western snowy plover, Santa Cruz kangaroo rat, American peregrine falcon, Alameda song sparrow, Edgewood Park micro-blind harvestman, and San Francisco gartersnake. As shown in Table 4.3-1 and Table 4.3-2, these species have varied legal status or are considered Species of Special Concern or Fully Protected by the CDFW. A few have no special status but are monitored by the CDFW because of recent declines and abundance.

As discussed in Chapter 3, *Project Description*, of this Draft EIR, the majority of new housing in San Carlos is expected on infill parcels near Downtown, along the El Camino Real corridor, along Old County Road between Holly Street and Terminal Avenue, and along East San Carlos Avenue. Most of the commercial growth is expected to occur in the Downtown area and most of the office growth is expected in the Downtown and Northeast areas. Research and development and industrial growth would be limited to the east side area of San Carlos. The potential for occurrence of special-status species in these developed areas is generally very remote in comparison to undeveloped lands with natural habitat that contain essential habitat characteristics for the range of species known in the EIR Study Area vicinity. While the potential for adverse impacts on special-status species is relatively low, there remains a varying potential for loss or disruption due to conversion of areas of natural habitat, removal of trees and other vegetation, increases in light and noise, and other modifications and disturbance. Development in locations abutting or in the vicinity of open space lands or water resources, where special-status species are more likely to occur, could potentially cause a significant impact to, or cause the inadvertent loss, of bird nests in active use, conflicting with both the MBTA and CFGC.

The Land Use (LU) Element, Environmental Management (EM) Element, and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including special-status species. The following General Plan goals, policies, and actions would serve to minimize potential adverse impacts related to special-status species:

- **Goal LU-1:** Ensure a sustainable land use pattern.
  - **Policy LU-1.9:** To the extent possible, retain the channels, floodplains, riparian corridors (including suitable setbacks from top of bank) and closely associated upland areas of Cordilleras, Brittan and Pulgas Creeks and their tributaries as significant open space areas. These areas should be maintained in their natural state to function as appropriate open space areas, greenbelt and to support a riparian habitat.
  - **Policy LU-1.11:** Preserve existing open space by supporting urban infill.
- **Goal EM-1:** Protect natural habitat and other biological resources.
  - **Policy EM-1.1:** Ensure that potential impacts to biological resources and sensitive habitat are carefully evaluated when considering development project applications.

## BIOLOGICAL RESOURCES

- **Policy EM-1.2:** Ensure that development is consistent with all federal, State and regional regulations for habitat and species protection.
- **Policy EM-1.5:** Promote the preservation of native species, habitat and vegetation types and overall natural diversity.
- **Action EM-1.1:** Continue to cooperate with local, regional and State agencies involved in protecting critical habitat.
- **Action EM-1.4:** Enforce rules and regulations in public open space areas to minimize the impacts of destructive activities.
- **Goal EM-2:** Promote healthy streams and riparian corridors.
  - **Policy EM-2.1:** Preserve and enhance riparian areas.
  - **Policy EM-2.2:** Continue to enforce the City's Riparian Ordinance for all four of the City's creeks (Pulgas, Brittan, Cordilleras and Belmont) and their tributaries.
  - **Policy EM-2.3:** Carefully evaluate the cumulative and compounding impacts of incremental creek encroachments.
  - **Policy EM-2.7:** Retain Pulgas, Brittan, Cordilleras and Belmont Creek channels and their 100-year floodplains wherever possible as natural open space areas. These areas are to function as storm drainage facilities and as open space greenbelts to support natural habitat.
  - **Action EM-2.1:** Consider amending the Riparian Ordinance to strengthen stream protection requirements and reduce potential for flooding. Potential amendments may include evaluation of increased setbacks, limited walls and fences, requiring Best Management Practices (BMPs) for biotechnical bank stabilization and erosion control and vegetation management requirements.
  - **Action EM-2.3:** Provide information to the public on City regulations and best practices for riparian corridor management.
  - **Action EM-2.6:** Consider preparation of Watershed Management Plans for all watersheds, addressing flooding causes, improvement of creek functionality and water quality and creek channel restoration
- **Goal PR-4:** Provide for environmentally-sustainable parks and recreational programs.
  - **Policy PR-4.1:** Preserve and protect sensitive species and habitats in City parks and open space, as identified by the Environmental Management Element of this Plan or state and federal guidelines.

Compliance with these General Plan goals, policies, and actions would help protect special-status species, and minimize impacts on any species identified as an endangered, threatened, candidate, sensitive, or special-status species and their habitat; therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## BIOLOGICAL RESOURCES

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**BIO-2**                      **The proposed project would not 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 CDFW or USFWS.**

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Impacts to riparian habitats and other sensitive natural communities may occur from both direct and indirect sources from implementation of the proposed project. Direct impacts occur as a result of converting natural habitat to development, including construction of new structures, creating impervious surfaces for roadways and parking, and culverting of natural drainages. Direct impacts may also be temporary in nature if they disturb a habitat that is subsequently restored after construction. An indirect impact is a physical change in the environment, which is not immediately related to, but could be caused by, future development and activities under the proposed project. For example, if future development within the buildout horizon of the proposed project results in a collective reduction in habitat, the values and functions of that remaining habitat would be reduced. Changes in hydrology and water quality, through increases in sedimentation as a result of grading and the introduction of urban pollutants, could also have indirect impacts on aquatic habitat and contribute to a reduction in the value of downgradient waters.

As discussed in Section 4.3.1.2, *Existing Conditions*, sensitive natural communities in the vicinity of the EIR Study Area include serpentine bunchgrass in the southern corner of the SOI and northern coastal salt marsh, northeast of the EIR Study Area. These marshlands are identified as wetlands under the National Wetlands Inventory, which is discussed further under impact discussion BIO-3.

Due to the built-out nature of the EIR Study Area, future development would occur in previously urbanized areas; nevertheless, there is a possibility that development could be proposed in locations that may contain riparian habitat or other sensitive natural community. Additionally, future development that occurs adjacent to open space areas or along drainages and shoreline areas could have a significant impact on sensitive natural communities if present on a particular site. Further detailed site investigation is typically necessary for individual development projects to determine whether any sensitive natural communities are present on sites with natural habitat.

Future development would be required to comply with SCMC Section 18.144.040, which requires a 25-foot setback from the top of bank on each side of the creek to protect waterways. Furthermore, as discussed in impact discussion BIO-1, the Land Use (LU) Element, Environmental Management (EM) Element, and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including riparian habitat and sensitive natural communities. The General Plan goals, policies, and actions listed in impact discussion BIO-1 would serve to minimize potential adverse impacts related to riparian habitat or other sensitive natural communities.

Compliance with SCMC regulations, as well as the General Plan goals, policies, and actions identified would protect riparian habitat or other sensitive natural communities. Therefore, the proposed project would have a *less-than-significant* impact on riparian habitat or other sensitive natural community.

**Significance without Mitigation:** Less than significant.

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<b>BIO-3</b>	<b>The proposed project would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means</b>
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Future development and land use activities within the buildout horizon of the proposed project could result in direct loss or modification to existing wetlands and unvegetated other waters, as well as indirect impacts due to water quality degradation. Affected wetlands could include both the wetland-related sensitive natural community described under impact discussion BIO-2, as well as areas of open water, degraded and modified streams and channels, unvegetated waters, and isolated seasonal wetlands or freshwater seeps. Indirect impacts to wetlands and jurisdictional other waters include an increase in the potential for sedimentation due to construction grading and ground disturbance, an increase in the potential for erosion due to increased runoff volumes generated by impervious surfaces, and an increase in the potential for water quality degradation due to increased levels in non-point pollutants.

Water quality degradation may occur even when wetlands and unvegetated channels are avoided by proposed development if setbacks are inadequate to provide critical vegetation filtration functions. However, future development would be required to comply with SCMC Section 18.144.040, which requires a 25-foot setback from the top of bank on each side of the creek to protect waterways. Indirect water quality-related issues are discussed further in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, and, as discussed in impact discussion HYD-1, water quality impacts were determined to be less than significant. Refer to Chapter 4.9 of this Draft EIR for a list of General Plan goals, policies, and actions that would preserve water quality of all water resources in the EIR Study Area, including wetlands.

Additionally, as discussed in impact discussion BIO-1, the Land Use (LU) Element, Environmental Management (EM) Element, and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including wetlands. The General Plan goals, policies, and actions listed in impact discussion BIO-1 would serve to minimize potential adverse impacts related to state or federally protected wetlands.

Compliance with SCMC regulations, as well as General Plan goals, policies, and actions, would ensure that the proposed project would have a *less-than-significant* impact on wetlands.

**Significance without Mitigation:** Less than significant.

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<b>BIO-4</b>	<b>The proposed project would not 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>
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Development and land use activities within the buildout horizon of the proposed project would generally be in urbanized areas with few wildlife corridors or locations and where wildlife is already acclimated to

## BIOLOGICAL RESOURCES

human activity. However, the EIR Study Area does contain some habitat areas that could be adversely affected by new development, particularly along creeks and other drainages, or adjacent to open space and undeveloped lands.

Future development could also result in the potential for bird collisions as a result of new buildings and other structures. Avian injury and mortality resulting from collisions with buildings, towers, and other human-made structures is a common occurrence in urban and suburban settings. Some birds are unable to detect and avoid glass and have difficulty distinguishing between actual objects and their reflected images, particularly when the glass is transparent and views through the structure are possible. Nighttime lighting can interfere with movement patterns of some night-migrating birds, causing disorientation or attracting them to the light source. The frequency of bird collisions in any particular area is dependent on numerous factors, including characteristics of building height, fenestration, and exterior treatments of windows and their relationship to other buildings and vegetation in the area; local and migratory avian populations, their movement patterns, and proximity of water, food and other attractants; time of year; prevailing winds; weather conditions; and other variables. Bird-safe design measures would serve to reduce the potential for bird collisions and can include the following design considerations and best management practice strategies:

- Avoid the use of highly reflective glass as an exterior treatment, which appears to reproduce natural habitat and can be attractive to some birds,
- Limit reflectivity and prevent exterior glass from attracting birds in building plans by utilizing low-reflectivity glass and providing other non-attractive surface treatments,
- Use low-reflectivity glass or other glazing treatments for the entirety of the building's glass surface, not just the lower levels,
- For commercial buildings, interior light "pollution" should be reduced during evening hours through the use of a lighting control system,
- Exterior lighting should be directed downward and screened to minimize illuminating the exterior of the building at night, except as needed for safety and security,
- Glass skyways or walkways, freestanding glass walls, and transparent building corners should not be allowed,
- Transparent glass should not be allowed at the rooflines of buildings, including in conjunction with green roofs, and
- All roof mechanical equipment should be covered by low-profile angled roofing so that obstacles to bird flight are minimized.

New buildings would alter existing physical characteristics of the EIR Study Area and could contribute to an increased risk of bird collisions and mortalities. For taller buildings and structures that extend above the existing surrounding urban fabric and height of the tree canopy, this could result in a significant impact unless appropriate bird-safe design measures were incorporated into the building design.

As discussed in impact discussion BIO-1, the Land Use (LU) Element, Environmental Management (EM) Element, and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including wildlife movement. In addition to the General Plan goals, policies, and actions listed in impact discussion BIO-1, the following General Plan goal and action would serve to minimize potential adverse impacts related to the movement of wildlife species or nursery sites:

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- **Goal EM-1:** Protect natural habitat and other biological resources.
  - **Action EM-1.5:** Require that major new buildings and taller structures that extend above the existing surrounding urban fabric and height of the tree canopy be designed to minimize the potential risk of bird collisions using input from the latest bird-safe design guidelines and best management practice strategies to reduce bird strikes.

Adherence to the General Plan goal and action listed above would ensure that the proposed project would not interfere with movement of wildlife species or nursery sites; therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

BIO-5	The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
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The City of San Carlos General Plan is the primary planning document for the City of San Carlos. Because the General Plan is the overriding planning document for San Carlos and because the proposed project is intended to ensure consistency between the General Plan, Zoning Ordinance, and federal and State laws and with the updated buildout projections, implementation of the proposed project would not conflict with local policies and ordinances protecting biological resources. As described in impact discussions BIO-2 and BIO-3, future development would be required to comply with SCMC Chapter 18.14 to protect waterways within the EIR Study Area. Furthermore, SCMC Section 18.18.070 has additional requirements for protected trees in the City related to replacement, maintenance, and preservation.

Additionally, the Land Use (LU) Element, Environmental Management (EM) Element, and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources. As outlined in impact discussion BIO-1, General Plan Policy EM-1.2 would ensure that development is consistent with all federal, State, and regional regulations for habitat and species protection. The following General Plan goals, policies, and actions would serve to minimize potential adverse impacts related to trees:

- **Goal EM-3:** Enhance the urban forest.
  - **Policy EM-3.1:** Maintain and expand the urban canopy with special emphasis on protection of heritage trees.
  - **Policy EM-3.2:** Review and amend the Zoning Ordinance as needed to identify barriers to the effective enhancement of the urban forest and the protection of heritage trees.
  - **Policy EM-3.3:** Assist community groups with tree planning efforts.
  - **Action EM-3.1:** Implement Climate Action Plan measures to require tree planting.
  - **Action EM-3.2:** Review and amend the Zoning Ordinance as needed to identify barriers to the effective enhancement of the urban forest and the protection of heritage trees.



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- **Action EM-3.3:** Establish and implement a program to protect existing and plant new trees at city facilities, public parks and in public planting strips and parking lots, working with non-profit volunteer groups if possible.

Future development within the EIR Study Area would be required to comply with applicable SCMC regulations and the General Plan goals, policies, and actions listed, which would reduce potential impacts on sensitive biological resources as a result of implementing the proposed project. With adherence to these regulations, no conflicts with local plans and policies are anticipated, and impacts would be considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>BIO-6</b>	<b>The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.</b>
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The EIR Study Area is not in any local, regional, or State habitat conservation plan areas. Therefore, the proposed project would not conflict with any such plan. The goals, policies, and actions in the proposed 2045 General Plan Reset, listed under impact discussions BIO-1 through BIO-5, along with the stated SCMC regulations, would serve to protect and enhance the sensitive natural communities and special-status species within the EIR Study Area. Therefore, *no impact* would occur.

**Significance without Mitigation:** No impact.

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<b>BIO-7</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative biological resource impacts in the area.</b>
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The impacts of future development on biological resources tend to be site-specific, and the overall cumulative effects would be dependent on the degree to which significant vegetation and wildlife resources are protected on a particular site. This includes preservation of well-developed native vegetation (e.g., native grasslands, oak woodlands, riparian woodland, and chaparral, among others), populations of special-status plant or animal species, and wetland features (e.g., coastal salt marsh, freshwater marsh and seeps, riparian corridors, and drainages). Potential impacts to biological resources and sensitive habitat would be carefully evaluated when considering development project applications and development is to be consistent with all federal, State, and regional regulations for habitat and species protection, as required by General Plan Policies EM-1.1 and EM-1.2, respectively. Compliance with these General Plan policies would serve to ensure that important biological resources are identified, protected, and properly managed, and to prevent any significant adverse development-related impacts, including development for the remaining undeveloped lands in the EIR Study Area and surrounding incorporated and unincorporated lands.

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To some degree, cumulative development contributes to an incremental reduction in the amount of existing natural wildlife habitat, particularly for birds and larger mammals. Habitat for species intolerant of human disturbance can be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained within parks, public and private open space, and undeveloped properties. New cumulative development in the region could result in further conversion of existing natural habitats to urban and suburban conditions, limiting the existing habitat values of the surrounding area. This could include further loss of wetlands and sensitive natural communities, reduction in essential habitat for special-status species, removal of mature native trees and other important wildlife habitat features, and obstruction of important wildlife movement corridors. Additional development may also contribute to degradation of the aquatic habitat in the creeks throughout the region, including the EIR Study Area. Grading associated with construction activities generally increases erosion and sedimentation, and urban pollutants from new development would reduce water quality.

However, future development within the buildout horizon of the proposed project in the EIR Study Area is anticipated to predominantly occur in existing urbanized areas. Future development that could occur elsewhere in the region, outside of the EIR Study Area, is also anticipated to occur largely in urbanized areas, given the generally built-out nature of the region. In the event that future development in the region is proposed in an undeveloped area, the project would likely undergo independent environmental review as required by the jurisdiction in which the project is proposed. Further, the General Plan goals, policies, and actions applicable to the proposed project would serve to address these contributions to cumulative impacts on sensitive biological and wetland resources, as discussed above. Therefore, the proposed project would not result in a cumulatively considerable impact to biological resources and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## CULTURAL RESOURCES

### 4.4 CULTURAL RESOURCES

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to cultural resources, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project. Potential impacts associated with tribal cultural resources are addressed in Chapter 4.16, *Tribal Cultural Resources*.

#### 4.4.1 ENVIRONMENTAL SETTING

##### 4.4.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

##### *National Historic Preservation Act*

The National Historic Preservation Act of 1966 established the National Register of Historic Places (National Register) as the official federal designation of historical resources, including districts, sites, buildings, structures, and objects. Resources less than 50 years in age, unless of exceptional importance, are not eligible for the National Register. Properties that are 50 or more years in age may be eligible for the National Register if one or more criterion for historic significance is met and physical integrity is retained. Though a listing in the National Register does not prohibit demolition or alteration of a property, the California Environmental Quality Act (CEQA) requires the evaluation of a project's effects and feasible mitigations on properties that are listed in, or determined eligible for listing in, the National Register.

According to 36 Code of Federal Regulations Part 60.4, the criteria for inclusion on the National Register, which are worded in a manner to provide for a wide diversity of resources, are based on the resources' quality of significance in American history, architecture, archeology, engineering, as well as the significance of the culture present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. The following aspects are used to evaluate the eligibility of potential resources for listing in the National Register:

- That are associated with events that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of persons significant in our past; or
- That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- That have yielded, or may be likely to yield, information important in prehistory or history.

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### *Secretary of the Interior's Standards for the Treatment of Historic Properties*

The Secretary of the Interior's Standards for the Treatment of Historic Properties (Secretary's Standards) promote responsible practices that help protect the nation's irreplaceable cultural resources. The Secretary of the Interior's Standards are neither technical nor prescriptive, and cannot, in and of themselves, be used to make essential decisions about which features of the historic building should be saved and which can be changed. But once a treatment is selected, the Secretary of the Interior's Standards provide for philosophical consistency in the work. An individual set of Secretary of the Interior's Standards has been formulated for each of four identified treatment approaches: Preservation, Rehabilitation, Restoration, and Reconstruction. The four approaches are defined below:

- *Preservation* requires retention of the greatest amount of historic fabric, along with the building's historic form, features, and detailing as they have evolved over time.
- *Rehabilitation* acknowledges the need to alter or add to a historic building to meet continuing or new uses while retaining the building's historic character.
- *Restoration* allows for the depiction of a building at a particular time in its history by preserving materials from the period of significance and removing materials from other periods.
- *Reconstruction* establishes a limited framework for re-creating a vanished or non-surviving building with new materials, primarily for interpretive purposes.

The Secretary's Standards for Rehabilitation—*Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995)—specifically address and encourage alterations or additions to a historic resource to allow new uses while retaining the resource's historic character. The Secretary of the Interior's Standards for Rehabilitation include the following: <sup>1</sup>

1. A property will be used as it was historically or be given new use that requires minimal changes to its distinctive materials, features, spaces and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alterations of features, spaces and spatial relationships that characterize a property will be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in

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<sup>1</sup> Anne E. Grimmer, revised 2017, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*, <https://www.nps.gov/orgs/1739/upload/treatment-guidelines-2017-part1-preservation-rehabilitation.pdf>, accessed October 17, 2024.

## CULTURAL RESOURCES

design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

### *Secretary of the Interior's Professional Qualifications Standards*

The Secretary of the Interior's Professional Qualifications Standards define minimum education and experience required to perform historic resources identification, evaluation, registration, and treatment activities. The areas of expertise defined by the Professional Qualifications Standards include History, Archeology, Architectural History, Architecture, and Historic Architecture.<sup>2</sup>

## State Regulations

### *California Environmental Quality Act*

Section 15064.5 of the CEQA Guidelines states that projects that may cause a substantial adverse change in the significance of a historical resource may also have a significant effect on the environment. The CEQA Guidelines define four ways that a property can qualify as a historical resource for purposes of CEQA compliance:

- The resource is listed in or determined eligible for listing in the California Register of Historical Resources, as determined by the State Historical Resources Commission.
- The resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- The lead agency determines the resource to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, as supported by substantial evidence in light of the whole record.

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<sup>2</sup> Code of Federal Regulations, 36, CFR Part 61.

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- The lead agency determines that the resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1 (CEQA Guidelines Section 15064.5) which means, in part, that it may be eligible for the California Register.

In addition, Public Resources Code Section 21083.2 and CEQA Guidelines Section 15126.4 specify lead agency responsibilities in determining whether a project may have a significant effect on archaeological resources. If it can be demonstrated that a project will damage a unique archaeological resource, reasonable efforts may be required of the lead agency so the resources are preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The Public Resources Code also details required mitigation if unique archaeological resources are not preserved in place.

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These provisions protect such remains from disturbance, vandalism, and inadvertent destruction by establishing procedures to be implemented if Native American skeletal remains are discovered during construction of a project and establish the Native American Heritage Commission (NAHC) as the authority to identify the most likely descendant (MLD) and mediate any disputes regarding disposition of such remains.

### *California Register of Historical Resources*

The California Register of Historic Resources (California Register) establishes a list of properties to be protected from substantial adverse change (Public Resources Code Section 5024.1). The State Office of Historic Preservation (OHP) has determined that buildings, structures, and objects 45 years or older may be of historical value. A historical resource may be listed in the California Register if it meets any of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- It is associated with the lives of persons important in California's past.
- It 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 value.
- It has yielded, or is likely to yield, information important in prehistory or history.

The California Register includes properties that are listed or have been formally determined eligible for listing in the National Register, State Historical Landmarks, and eligible Points of Historical Interest. Other resources that may be eligible for the California Register, and which require nomination and approval for listing by the State Historic Resources Commission, include resources contributing to the significance of a local historic district, individual historical resources, historical resources identified in historic surveys conducted in accordance with OHP procedures, historic resources or districts designated under a local ordinance consistent with the procedures of the State Historic Resources Commission, and local landmarks or historic properties designated under local ordinance.

### *California Historical Building Code*

The California Historical Building Code (as set forth in Sections 18950 to 18961 of Division 13, Part 2.7 of Health and Safety Code and as subject to the rules and regulations set forth in 24 CCR Part 8), provides

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alternative building regulations and standards for permitting repairs, alterations, and additions necessary for the rehabilitation, preservation, restoration (including related reconstruction), or relocation of historical buildings, structures, and properties deemed by any level of government as having importance to the history, architecture, or culture of an area.

### *California Public Resources Code Section 5097*

Archaeological resources are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code (PRC). In addition, cultural resources are recognized as a nonrenewable resource and therefore receive protection under the California PRC and CEQA.

PRC Sections 5097.9 through 5097.991 provide protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the NAHC. It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

### *California Health and Safety Code*

California Health and Safety Code Section 7050.5 requires that, in the event that human remains are discovered within the project site, disturbance of the site shall halt and 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. 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, they shall contact, by telephone within 24 hours, the NAHC.

### *State Laws Pertaining to Human Remains*

Any human remains encountered during ground-disturbing activities are required to be treated in accordance with California Code of Regulations Section 15064.5(e) (CEQA), PRC Section 5097.98, and the California Health and Safety Code Section 7050.5. California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Specifically, Section 7050.5 of the California Health and Safety Code 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 or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are determined to be of Native American origin, the county coroner must contact the California NAHC within 24 hours of this identification. An NAHC representative will then identify a Native American Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. In addition, CEQA Guidelines Section 15064.5 specifies the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

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### Local Regulations

#### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.4.3, *Impact Discussion*.

#### *San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to cultural resources as follows:

- Chapter 15.04, *Technical Building Codes*, adopts the 2022 California Historical Building Code as the rules, regulations, and standards within the city as to all matters except as modified or amended in the SCMC.
- Chapter 18.40, *Use Classifications*, defines cultural institutions as a public or nonprofit institutions engaged primarily in the display or preservation of objects of interest in the arts or sciences that are open to the public on a regular basis. This classification includes performing arts centers for theater, music, dance, and events; buildings of an educational, charitable or philanthropic nature; libraries; museums; historical sites; aquariums; art galleries; and zoos and botanical gardens.

### 4.4.1.2 EXISTING CONDITIONS

#### Historical Resources

Because the San Francisco Peninsula reflects a number of historical periods, events, and persons, San Carlos has a unique and special importance in the historical period extending from 1776 until the mid-1850s. Based on historical documentary research and archaeological investigations, cultural resources in San Carlos are known to be associated with diverse ethnic and religious groups, such as Native Americans, Californios, Franciscan missionaries, and Euroamerican settlers. In the mid-20<sup>th</sup> century, San Carlos rapidly expanded, due significantly to the Dalmo Victor and Eitel McCullough electronics plants' construction in 1944. Home of such companies as Dalmo Victor, Ampex, and Varian, San Carlos holds an important place in the history of the electronics industry. Remaining resources that are associated with the surge in the technology industry are of special merit.

The following describes the historical resources in San Carlos that are listed in either the National Register, the California Register, or both:

- **Southern Pacific Depot-San Carlos, 559 El Camino Real.** The Southern Pacific Railroad Station in San Carlos was constructed in the Richardsonian Romanesque Style in 1888. The station, formally located at 599 El Camino Real was included within the National Register in 1984 and received a status code of "1S," or "individual property listed in National Register by the Keeper, Listed in California Register."



## CULTURAL RESOURCES

- **Nathanial Brittan Party House, 125 Dale Avenue.** The Nathanial Brittan Party House at 125 Dale Avenue in the city of San Carlos was constructed in 1872 and included within the National Register of Historic Properties in 1994 (NPS-940011500-9999). The property is listed with status codes of both “1S,” or “individual property listed in National Register by the Keeper, Listed in California Register” and “1D,” or “contributor to a district or multiple resource property listed in the NR by the Keeper; listed in the CR.” According to the site record, the “Party House” is a two-and-half story, redwood-framed octagonal “folly” and was constructed for the purposes of entertaining fellow members of the Bohemian Club away from the main home of Mr. Brittan and his wife. The home is significant in the architectural history of California under Criterion C as one of the few remaining examples of the nineteenth century Octagon Mode of building design. The garage on the property was given a status code of “6X,” or “determined ineligible for the NR by SHRC or Keeper.”
- **621 Knoll Drive.** Timby House is eligible for the National Register at the national level of significance under Criterion C in the area of Architecture as it embodies the distinctive characteristics of a type of construction known as the California Ranch Style during the second generation of the Bay Area architectural tradition. It represents the work of California master architect William Wurster and landscape architect Thomas Church.<sup>3</sup>

### *Local Historical Landmarks*

In 1990, a group of volunteers identified and researched the historic resources in San Carlos. The volunteers’ efforts led to the creation of the 1991 Historic Resources Inventory. The inventory contains 52 listings that include residential and commercial structures and one public park. For descriptive purposes, the inventory also identifies two Historic districts - the Hacienda Gardens Apartments at 1315 San Carlos Avenue and the 1000 Block of Elm Street between Morse Boulevard and Brittan Avenue.

Hacienda Gardens, constructed in 1931, was the first apartment complex in the city. Built in the Spanish Eclectic style, the apartments were well suited for the suburban commuter and are an indicator of development trends during the Great Depression. The fourteen units in six buildings of the complex are located on the city’s main thoroughfare at 1315 San Carlos Avenue. In 2005 it received a status code of 7J, or “received by OHP for evaluation but not yet evaluated.”

The 1000 block of Elm Street, which consists of structures mainly built between 1926 and 1929, represents a mixture of architectural styles including Spanish Eclectic and Tudor Revival. A noteworthy characteristic of the houses on the street is the general intactness. It is also a symbol of a major period of development in the city.

## Archaeological Resources

Due to its large prehistoric populations, the San Francisco Peninsula region is considered archaeologically sensitive for buried sites. All archaeological deposits in San Carlos associated with Native American are potentially eligible for listing in the California Register for their research potential (Criterion D). Literature

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<sup>3</sup> United States Department of the Interior, 2021, National Register of Historic Places Registration Form, [https://ohp.parks.ca.gov/pages/1067/files/CA\\_San%20Mateo\\_Timby%20House\\_DRAFT.pdf](https://ohp.parks.ca.gov/pages/1067/files/CA_San%20Mateo_Timby%20House_DRAFT.pdf), accessed October 8, 2024.

## CULTURAL RESOURCES

on the archaeological resources of the San Carlos region indicates that expected archaeological resources could have important research value and would therefore be significant under CEQA.<sup>4</sup>

### *Prehistoric Archaeological Resources*

Archaeological literature about the San Francisco Peninsula has tended to place significance on archaeological resources associated with prehistoric populations. Since intact prehistoric archaeological deposits are scarce on the Peninsula, sites with these associations may be considered significant (Criterion D). Potential archaeological remains in San Carlos could be eligible for listing in the California Register on the basis of their association with the Spanish/Mexican Period, the Franciscan missionization of California Native Americans (Criterion A). Archaeological sites and artifacts would have a high degree of interpretive value relative primarily to Native Americans. The Spanish/Mexican period of San Carlos history may also be represented under prehistoric archaeological resources. Remnants of the early inhabitants are limited as there are only a few known archaeological sites in the city located primarily near the banks of Cordilleras and Pulgas Creeks. San Carlos' existing historic character is defined by its more recent cultural resources.

In 1990, Stanford professor and archaeologist, Barbara Bocek, recorded an archaeological deposit near the bank of Cordilleras Creek (CA-SM-303). The prehistoric site is described as the remains of an earth mound on the creek bank with black midden soils. Fire cracked rock and a large, burned mammal bone, as well as chert flakes and shellfish were all found in association with the midden site. The area surrounding the site has since been developed into a housing division and it is possible that the site extended into the privately owned parcels. Some landowners have also found projectile points within the area.

In 1990, Ms. Bocek recorded an additional prehistoric midden site located on the banks of the Pulgas Creek (CA-SMA-310). The site consisted of several large, non-contiguous patches of black shell-laden earth, stretching along nearly 300 meters of the creek bank, stone flakes, and a possible hammerstone. Most of the site was destroyed during the construction of San Carlos Avenue and nearby residential development.

### *Historic Archaeological Resources*

Archaeological sites and artifacts in San Carlos may have a high degree of interpretive value relative to the Spanish/Mexican period of the San Francisco Peninsula, California architectural history, the history of missionization in California, and the history of the American Southwest in general (Criterion A). Resources in the built environment may be considered significant for their architectural and technological history (Criterion C) or may be associated with an important individual such as Leland Stanford (Criterion B).

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<sup>4</sup> City of San Carlos, June 29, 2005, *San Carlos 2030 General Plan EIR*.

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### 4.4.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant cultural resource impact if it would:

- CULT-1 Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.
- CULT-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- CULT-3 Disturb any human remains, including those interred outside of dedicated cemeteries.
- CULT-4 In combination with past, present, and reasonably foreseeable projects, result in cumulative cultural resource impacts in the area.

### 4.4.3 IMPACT DISCUSSION

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<b>CULT-1</b>	<b>The proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.</b>
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The types of cultural resources that meet the definition of historical resources under CEQA Guidelines Section 15064.5 generally consist of districts, sites, buildings, structures, and objects that are significant for their traditional, cultural, and/or historical associations, as detailed in Section 4.4.1.1, *Regulatory Framework*. Under CEQA, both prehistoric- and historic-period archaeological sites may qualify based on historical associations. As such, the two main historical resources that are subject to impact, and that may be impacted by implementation of the proposed project, are historical archaeological deposits and historical architectural resources. Potential impacts to archaeological resources are described in impact discussion CULT-2, and potential impacts to human remains are addressed in impact discussion CULT-3.

As discussed under Section 4.4.1.2, *Existing Conditions*, several individual properties and historic districts within the EIR Study Area meet the CEQA definition of a historical resource, including three properties that are individually listed in the National Register and/or California Register. In addition to these known historical resources, unidentified or undesignated historic resources that may be eligible for listing in the National Register and/or California Register exist within the EIR Study Area. Potential impacts from future development on, or adjacent to, historical resources could lead to (1) demolition, which by definition results in the material impairment of a resource's ability to convey its significance; (2) inappropriate modification, which may use incompatible materials, designs, or construction techniques in a manner that alters character-defining features; and (3) inappropriate new construction, which could introduce incompatible new buildings that clash with an established architectural context. For example, the design characteristics and materials of new construction could impact adjoining or nearby historical buildings.

Future development projects could occur on or near sites containing historic resources. Development activities under the proposed project therefore have the potential to be incompatible with historical resources, which could result in a significant impact. Additionally, if future development were to directly impact existing resources, impacts on historical resources could be significant.

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Future development projects would be required to comply with existing federal, State, and local laws and regulations that protect historical resources. On a project-by-project basis, CEQA requires the evaluation and disclosure of significant effects on properties on historical resources listed in the National Register, California Register, or local register, and on properties determined to be significant by the lead agency or eligible for listing in the California Register. Therefore, properties in the EIR Study Area that are listed in or determined to be eligible for listing in the National and California Registers would be categorized as historic resources even if they are not formally landmarked by the City. Future projects would be required to comply with SCMC Chapter 15.04, which adopted the 2022 Edition of California Historical Building Code and its regulations for permitting repairs, alterations, and additions necessary for the preservation, rehabilitation, relocation, related construction, change of use, or continued use of a qualified historical building or structure.

Furthermore, the Land Use (LU) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to cultural resources, including historic resources. The following General Plan goals, policies, and actions would serve to minimize potential adverse impacts related to historic resources:

- **Goal LU-2:** Preserve and strengthen Downtown as the civic, cultural and social heart of the city.
  - **Policy LU-2.2:** Strive to maintain the character of the historic Downtown core, which is centered at the 1100 and 1200 blocks of San Carlos Avenue and the 600, 700 and 800 blocks of Laurel Street.
  - **Policy LU-2.3:** Encourage development that respects the character of the historic Downtown core.
- **Goal LU-12:** Protect San Carlos' historic and cultural resources to maintain and enhance a unique sense of place.
  - **Policy LU-12.1:** Evaluate historical and cultural resources early in the development review process through consultation with interested parties.
  - **Policy LU-12.2:** Foster the preservation, restoration and compatible reuse of architecturally and/or historically significant structures and sites.
  - **Policy LU-12.3:** Ensure that modifications to identified historic resources are consistent with the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties.
  - **Policy LU-12.4:** Encourage continued use and adaptive reuse of designated historic resources through application of the U.S. Secretary of the Interior's Standards and Guidelines for rehabilitation, reconstruction and restoration.
  - **Policy LU-12.6:** Promote the maintenance, restoration and rehabilitation of historical resources through but not limited to the use of Federal Rehabilitation Tax Credits, State incentives including the Mills Act and the California Cultural and Historical Endowment and the California State Historical Building Code.
  - **Policy LU-12.7:** Retain the exterior architectural character and setting of the Historical San Carlos Depot and San Carlos Museum (former San Carlos Fire House).

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- **Action LU-12.1:** Ensure thorough compliance with the provisions of the California Environmental Quality Act (CEQA) relating to potential impacts to cultural and historical resources.
- **Action LU-12.2:** Apply for Certified Local Government status to become eligible for participation in federal and State historic preservation programs.
- **Action LU-12.3:** Update the city's inventory and map of historic and architecturally significant properties and landmarks every five years.
- **Action LU-12.4:** Develop a cultural landmark and historic preservation plan and supporting ordinances.

Under CEQA, conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties would normally mitigate impacts to a less-than-significant level. Because the proposed 2045 General Plan Reset is a program-level document, it is not possible to determine whether individual projects under the proposed project would be able to conform with the Secretary of Interior's Standards. Future projects subject to project-level CEQA review would require evaluation of the project's potential to affect the significance of a surrounding historical resource and mitigation to the extent feasible. The requirement for subsequent CEQA review, pursuant to State law, would minimize the potential for new development to indirectly affect the significance of existing historical resources to the maximum extent practicable.

Compliance with federal and State laws described in Section 4.4.1.1, *Regulatory Framework*, the SCMC, and the General Plan goal, policies, and action identified above would ensure future development would not be detrimental or injurious to property or improvements in the vicinity and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

CULT-2	The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
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Historical and pre-contact archaeological deposits that meet the definition of archaeological resources under CEQA could be damaged or destroyed by ground-disturbing activities associated with future development in San Carlos. A substantial adverse change in the significance of an archaeological resource would occur from its demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired per CEQA Guidelines Section 15064.5(b)(1). Should this occur, the ability of the deposits to convey their significance, either through containing information important in prehistory or history, or through possessing traditional or cultural significance to Native American or other descendant communities, would be materially impaired.

As discussed in Section 4.4.1.2, *Existing Conditions*, there are only a few known archeological sites in the city and remnants of the early inhabitants are limited and archaeological resources are not generally expected. However, the potential exists for the presence of undisturbed archaeological resources throughout the EIR Study Area. Ground-disturbing construction activities (e.g., site preparation, grading,

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excavation, and trenching for utilities) associated with the proposed project may result in unanticipated discoveries of cultural resources or the damage or destruction of previously undiscovered resources. Due to the built-out nature of the EIR Study Area, future development would occur in areas that have already been developed, which reduces the potential for disturbing archaeological deposits since ground-disturbing activities have already taken place.

The Land Use (LU) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to cultural resources, including archaeological resources. The following General Plan goals and policies would serve to minimize potential adverse impacts related to archaeological resources:

- **Goal LU-1:** Ensure a sustainable land use pattern.
  - **Policy LU-1.10:** Require that development within the Pulgas, Brittan and Cordilleras Creek watersheds shall preserve watershed integrity, including natural vegetation, soil and slope stability, water quality, scenic values and potential archaeological resources.
- **Goal LU-12:** Protect San Carlos' historic and cultural resources to maintain and enhance a unique sense of place.
  - **Policy LU-12.5:** Treat with respect and dignity any human remains discovered during implementation of public and private projects within the city and fully comply with the California Native American Graves Protection and Repatriation Act and other appropriate laws.

Compliance with existing federal, State, and local laws and regulations, and the General Plan goals and policies listed above would protect recorded and unrecorded archaeological deposits in the city. Therefore, implementation of the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>CULT-3</b>	<b>The proposed project would not disturb any human remains, including those interred outside of dedicated cemeteries.</b>
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Previously undiscovered human remains associated with pre-contact archaeological deposits may exist within the EIR Study Area, as ground-disturbing activities sometimes uncover such previously unrecorded remains. As described in impact discussion CULT-2, ground-disturbing activities and excavation for the project would have the potential to uncover buried resources. It is possible that human remains may be present in the EIR Study Area. Descendant communities may ascribe religious or cultural significance to such remains, making any such disturbances a potentially significant impact.

Future development under the proposed project would be required to comply with Section 7050.5 of the Health and Safety Code and Section 5097 of the Public Resources Code, discussed in Section 4.4.1.1, *Regulatory Framework*. In the event a human burial or skeletal element is identified during excavation or construction, work in that location shall stop immediately until the find can be properly treated. The San Mateo County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner

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shall notify the NAHC within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. If the NAHC is unable to identify an MLD, the MLD fails to make a recommendation within 48 hours after being notified, or the landowner rejects the recommendation of the of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance.

Additionally, as discussed in impact discussion CULT-2, the Land Use (LU) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to cultural resources, including human remains. The General Plan goals and policies listed in impact discussion CULT-2 would serve to minimize potential adverse impacts related to human remains.

With the mandatory regulatory procedures and compliance with the General Plan goals and policies discussed above, potential impacts related to the potential discovery or disturbance of any human remains accidentally unearthed during construction activities associated with future development would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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CULT-4	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative cultural resource impacts in the area.
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The impacts of future development under implementation of the proposed project on cultural resources tend to be site specific, and cumulative impacts would occur when a series of actions leads to the loss of a substantial type of site, building, or resource. For example, while the loss of a single historic building may not be significant to the character of a neighborhood or streetscape, continued loss of such resources on a project-by-project basis could constitute a significant cumulative effect. This is most obvious in historic districts, where destruction or alteration of a percentage of the contributing elements may lead to a loss of integrity for the district overall. For example, changes to the setting or atmosphere of an area by adding modern structures on all sides of a historically significant building, thus altering the aesthetics of the streetscape, would create a significant impact. Destruction or relocation of historic buildings would also significantly impact the setting.

Future development allowed under the proposed project would be primarily within the developed portions of the EIR Study Area. This, in conjunction with buildout of the city and the region, has the potential to cumulatively impact cultural resources. The existing federal, State, and local regulations and General Plan goals, policies, and actions described throughout this chapter serve to protect cultural resources in San Carlos. Continued compliance with these regulations substantially decreases potential

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impacts to historical resources, archaeological resources, and human remains to the maximum extent practicable. Cumulative impacts related to cultural resources would therefore be *less than significant*.

**Significance without Mitigation:** Less than significant.



## 4.5 ENERGY

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to energy, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

Section 21100(b)(3) of the California Environmental Quality Act (CEQA) requires that an EIR include a detailed statement with 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 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 Appendix G of the State CEQA Guidelines, this Draft EIR includes relevant information and analyses that address the energy implications of the proposed project. This chapter summarizes the proposed anticipated energy needs, impacts, and conservation measures associated with future development and activities under the proposed project. The information in this chapter and other aspects of the proposed project's energy implications are also discussed in Chapter 3, *Project Description*, Chapter 4.2, *Air Quality*, Chapter 4.7, *Greenhouse Gas Emissions*, and Chapter 4.15, *Transportation*, of this Draft EIR. The energy usage and transportation fuel usage are included in Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

### 4.5.1 ENVIRONMENTAL SETTING

#### 4.5.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

###### *Federal Energy Policy and Conservation Act*

The Energy Policy and Conservation Act of 1975 was established in response to the 1973 oil crisis. The act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of United States crude oil (with a few limited exceptions). It also created Corporate Average Fuel Economy (CAFE) standards for passenger cars starting in model year 1978. The CAFE standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025 that required a fleet average of 54.5 miles per gallon (MPG) for model year 2025. However, on March 30, 2020, the

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United States Environmental Protection Agency (USEPA) finalized an updated CAFE and greenhouse gas (GHG) emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 through 2026.

On December 21, 2021, under direction of Executive Order (EO) 13990 issued by President Biden, the National Highway Traffic Safety Administration repealed Safer Affordable Fuel Efficient Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. In addition, on March 31, 2022, the National Highway Traffic Safety Administration finalized new fuel standards in response to EO 13990. Fuel efficiency under the standards proposed will increase 8 percent annually for model years 2024 to 2025 and 10 percent annually for model year 2026. Overall, the new CAFE standards require a fleet average of 49 MPG for passenger vehicles and light trucks for model year 2026, which would be a 10 MPG increase relative to model year 2021.<sup>1</sup>

On June 7, 2024, NHTSA announced final CAFE standards for passenger cars and light trucks built in model years 2027-2031 and final fuel efficiency standards for heavy-duty pickup trucks and vans built in model years 2030-2035. The final rules establish standards that would require an industry fleet-wide average of approximately 50.4 mpg for passenger cars and light trucks in model year 2031, by increasing fuel economy by 2 percent year over year for passenger cars (model years 2027-2031) and for light trucks (model years 2029-2031). For heavy-duty pickup trucks and vans, the final rule would increase fuel efficiency at a rate of 10 percent per year (model years 2030-2032) and 8 percent per year (model years 2033-2035).<sup>2</sup>

### *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 CAFE 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.<sup>3</sup>

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<sup>1</sup> National Highway Traffic Safety Administration, April 1, 2022, USDOT Announces New Vehicle Fuel Economy Standards for Model year 2024-2026. <https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026>, accessed September 18, 2024.

<sup>2</sup> National Highway Traffic Safety Administration, June 7, 2024, Corporate Average Fuel Economy, NHTSA Announces Final Rule for CAFE and HDPV Standards. <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>, accessed September 18, 2024.

<sup>3</sup> United States Environmental Protection Agency, updated May 12, 2022, Summary of the Energy Independence and Security Act, <https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act>, accessed September 18, 2024.

### *Energy Policy Act of 2005*

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

### *National Energy Policy*

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

### *Natural Gas Pipeline Safety Act of 1968*

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the United States Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system.

## **State Regulations**

### *Warren-Alquist Act*

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest edition was in January 2023.

### *California Energy Commission*

The California Energy Commission (CEC) was created in 1974 under the Warren-Alquist Act as the State's principal energy planning organization in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecast statewide electricity needs.
- License power plants to meet those needs.
- Promote energy conservation and efficiency measures.
- Develop renewable energy resources and alternative energy technologies.

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- Promote research, development and demonstration.
- Plan for and direct the state's response to energy emergencies.

### *California Public Utilities Commission*

In September 2008, the California Public Utilities Commission (CPUC) adopted the Long-Term Energy Efficiency Strategic Plan, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. This Plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020;<sup>4</sup>
- All new commercial construction in California will be zero net energy by 2030;
- Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate; and
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the Long-Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five billion-plus square feet of space accounts for 38 percent of the state's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of state's electricity and gas use.<sup>5</sup>

The CPUC and CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- **Goal 1:** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- **Goal 2:** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- **Goal 3:** Transform the commercial lighting market through technological advancement and innovative utility initiatives.

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<sup>4</sup> Zero net energy buildings are buildings that the total amount of energy used by the building on an annual basis is equal to or less than the amount of renewable energy created on the site.

<sup>5</sup> California Public Utilities Commission, January 2011, CA Energy Efficiency Strategic Plan, <https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/c/5303-caenergyefficiencystrategicplan-jan2011.pdf>, accessed September 18, 2024.

### *Renewable Portfolio: Carbon Neutrality Regulations*

#### Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

The California Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill (SB) 1078 and was amended in 2006, 2011, and 2018. 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 California 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.

#### Senate Bill 350

Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

#### Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which replaces the SB 350 requirements. Under SB 100, the RPS for public owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 also established a new RPS requirement of 50 percent by 2026. 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.

#### Senate Bill 1020

SB 1020 was signed into law on September 16, 2022. It requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

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### 2023 Integrated Energy Policy Report

The California Energy Commission (CEC) published the 2023 Integrated Energy Policy Report to identify pathways to deeply decarbonize the state's electricity system in response to meeting the SB 100 goal of zero-carbon by 2045. The report provides an analysis of electricity sector trends, building decarbonization and energy efficient, zero-emission vehicles, energy equity, climate change adaptation, electricity reliability, natural gas assessment, and electricity, natural gas, and transportation energy demand forecasts. The aim is to leverage California's clean electricity system to decarbonize, or remove carbon from, other portions of the state's energy system. SB 1389 (Chapter 568, Statutes of 2002) requires the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery, distribution, electricity demand, and price to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety.

### *Energy Efficiency Regulations*

#### Appliance Efficiency Regulations

California's Appliance Efficiency Regulations 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 (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.<sup>6</sup>

#### California Building Energy Code: 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 2022 (California Code of Regulations Title 24, 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 August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards became effective and replaced the existing 2019 standards on January 1, 2023. The 2022 standards would require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants,

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<sup>6</sup> California Energy Commission, 2017, *2016 Appliance Efficiency Regulations*, <https://pdf4pro.com/cdn/2016-appliance-efficiency-regulations-5104f7.pdf>, accessed September 18, 2024.

retail stores, schools, warehouses, theaters, and convention centers.<sup>7</sup> The 2025 Building Energy Efficiency Standards were adopted in September 2024 and will become effective on January 1, 2026. The Building Energy and Efficiency Standards and CALGreen undergo a triennial update with a goal to achieve zero net energy for residential buildings by 2020 and nonresidential buildings by 2030.

#### California Building Code: 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 (CBCS). 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 CALGreen became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen update, which was approved as part of 2022 Energy Code became effective on January 1, 2023, and provides updates to the residential and non-residential voluntary measures.

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, stormwater 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.<sup>8</sup>

#### 2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601 through 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. They 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 (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.

<sup>7</sup> California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

<sup>8</sup> California Building Standards Commission, July 2022, *2022 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11*, <https://codes.iccsafe.org/content/CAGBC2022P1/copyright>, accessed September 18, 2024.

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### *Off-road Equipment and Transportation-Related 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 USEPA. In 2012, the USEPA 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 CAFE standards under *Federal*, above). In January 2012, the California Air Resources Board approved the Pavley 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.<sup>9</sup>

#### Title 13, Chapter 9, Article 4.8, Section 2449

Section 2449 of the California Code of Regulations, Title 13, Chapter 9, Article 4.8 was adopted on May 2, 2008 that limits non-essential idling of fleets to no more than five consecutive minutes at any location. This idling restriction applies to all vehicles in California with a diesel-fueled or alternative diesel-fueled off-road engine, unless a waiver provides sufficient justification that such idling is necessary.

#### 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 vehicle miles traveled (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 Association of Bay Area Governments (ABAG) is the MPO for the Bay Area region, which includes the city of San Carlos. Pursuant to the recommendations of the Regional Transportation Advisory Committee (RTAC), CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

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<sup>9</sup> California Air Resources Board, January 18, 2017, California's Advanced Clean Cars Midterm Review, [https://ww2.arb.ca.gov/sites/default/files/2020-01/ACC%20MTR%20Summary\\_Ac.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-01/ACC%20MTR%20Summary_Ac.pdf), accessed September 18, 2024.



### AB 1007 State Alternative Fuels Plans

AB 1007 (Chapter 371, Statutes 2005) required the CEC to prepare a State plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with CARB and in consultation with other State, federal, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative, nonpetroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-State production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce GHG emissions, and increase in-State production of biofuels without causing a significant degradation of public health and environmental quality.

### Executive Order N-79-20

On September 23, 2020, Executive Order N-79-20 was issued, which sets a time frame for the transition to zero-emissions (ZE) passenger vehicles and trucks in addition to off-road equipment. It directs CARB to develop and propose the following:

- Passenger vehicle and truck regulations requiring increasing volumes of new ZEVs (zero-emission vehicles) sold in California toward the target of 100 percent of in-state sales by 2035.
- Medium- and heavy-duty vehicle regulations requiring increasing volumes of new ZE trucks and buses sold and operated in California toward the target of 100 percent of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage trucks to be ZE by 2035.
- Strategies to achieve 100 percent zero emissions from all off-road vehicles and equipment operations in California by 2035, in cooperation with other State agencies, the EPA, and local air districts.

On August 25, 2022, CARB adopted the Advanced Clean Cars II (ACC II) regulations that codifies the EO goal of 100 percent of in-state sales of new passenger vehicles and trucks be ZE by 2035. Starting in year 2026, ACC II requires that 35 percent of new vehicles sold be ZE or plug-in hybrids.<sup>10</sup>

### Advanced Clean Fleets Regulation

In April 2023, CARB released the Advanced Clean Fleets (ACF) regulation to accelerate the transition to zero-emission medium- and heavy-duty vehicles.<sup>11</sup> In conjunction with the Advanced Clean Trucks (ACT) regulation, the ACF regulations helps to ensure that medium- and heavy-duty zero-emission vehicles (ZEV) are brought to the market, by requiring certain fleets to purchase ZEVs. The ACF ZEV phase-in approach which provides initial focus where the best fleet electrification opportunities exist, sets clear

<sup>10</sup> California Air Resources Board, August 25, 2022, California moves to accelerate to 100% new zero-emission vehicle sales by 2035. <https://ww2.arb.ca.gov/news/california-moves-accelerate-100-new-zero-emission-vehicle-sales-2035#:~:text=The%20rule%20establishes%20a%20year,Order%20N%2D79%2D20>, accessed September 18, 2024.

<sup>11</sup> California Air Resources Board, 2024, Advanced Clean Fleets Regulation. <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets/about>, accessed September 18, 2024.

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targets for regulated fleets to make a full conversion to ZEVs, and creates a catalyst to accelerate development of a heavy-duty public infrastructure network.

The ACF regulations covers four main elements:

- **Manufacturer sales mandate.** Manufacturers may sell only zero-emission medium- and heavy-duty vehicles starting in 2036.
- **Drayage fleets.** Beginning January 1, 2024, trucks must be registered in the CARB Online System to conduct drayage activities in California. Non-zero-emission “legacy” drayage trucks may register in the CARB Online System through December 31, 2023. Legacy drayage trucks can continue to operate through their minimum useful life. Beginning January 1, 2024, only zero-emission drayage trucks may register in the CARB Online System. All drayage trucks entering seaports and intermodal railyards would be required to be zero-emission by 2035.
- **High priority and federal fleets.** High priority and federal fleets must comply with the Model Year Schedule or may elect to use the optional ZEV Milestones Option to phase-in ZEVs into their fleets:
  - **Model Year Schedule:** Fleets must purchase only ZEVs beginning 2024 and, starting January 1, 2025, must remove internal combustion engine vehicles at the end of their useful life as specified in the regulation.
  - **ZEV Milestones Option (Optional):** Instead of the Model Year Schedule, fleets may elect to meet ZEV targets as a percentage of the total fleet starting with vehicle types that are most suitable for electrification.
- **State and local agencies.** State and local government fleets, including city, county, special district, and State agency fleets, would be required to ensure 50 percent of vehicle purchases are zero-emission beginning in 2024 and 100 percent of vehicle purchases are zero-emission by 2027. Small government fleets (those with 10 or fewer vehicles) and those in designated counties would start their ZEV purchases beginning in 2027. Alternately, State and local government fleet owners may elect to meet ZEV targets using the ZEV Milestones Option. State and local government fleets may purchase either ZEVs or near-ZEVs, or a combination of ZEVs and near-ZEVs, until 2035. Starting in 2035, only ZEVs will meet the requirements.

The ACF regulations would also establish requirements that transform the medium- and heavy-duty vehicle sector and demonstrate independent utility through achievement of the following objectives:

- Achieve criteria and GHG emissions reductions consistent with the goals identified in the State Implementation Plan (SIP) Strategy and Scoping Plan.
- Provide emissions reductions in disadvantaged communities (DAC), thereby supporting the implementation of Assembly Bill (AB) 617 (Garcia, C., Chapter 136, Statutes of 2017).
- Support the goals of Executive Order N-79-20 which calls for accelerated ZEV deployment with these targets:
  - 100 percent ZE drayage by 2035
  - 100 percent ZE trucks and buses where feasible by 2045
- Ensure requirements, such as ZEV deployment schedules and related infrastructure build-out, are technologically feasible, cost-effective, and support market conditions.

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- Lead the transition away from petroleum fuels and towards electric drivetrains.
- Contribute towards achieving carbon neutrality in California pursuant to Senate Bill (SB) 100, and in accordance with Executive Order B-55-18.
- Mindfully set requirements to allow time for public ZE infrastructure buildout for smaller fleets or for regional haul applications who would be reliant on a regional network of public chargers.
- Ensure manufacturers and fleets work together to place ZEVs in service suitably and successfully as market expands.
- Establish a fair and level playing field among fleet owners.
- Craft the Proposed Project in a way that ensures institutional capacity for CARB to manage, implement, and enforce requirements.

### *Energy Storage*

California has set ambitious long-term goals for energy storage beyond 2026 to support its clean energy and climate goals. The state aims to reach 100 percent carbon-free electricity by 2045, which will require significant investment in renewable energy sources like wind and solar, as well as energy storage technologies to balance the variability of these sources.

The California Independent System Operator (CAISO) has a total energy storage capacity of more than 3,160 megawatts (MW) as of June 2022.<sup>12</sup> This includes both large-scale and distributed energy storage systems, such as batteries, pumped hydroelectric storage, and thermal storage. CAISO is responsible for managing the electricity grid for much of California, and it has set a target of adding 3,300 MW of additional energy storage capacity by 2024 to support the integration of more renewable energy sources like wind and solar. As part of SB 100, load serving entities (LSEs) were required to procure no less than 1.3 gigawatts (GW) of energy storage capacity by 2020, and 3 GW by 2030. Additionally, the CPUC has established a target of 15 GW of energy storage capacity by 2030.<sup>13</sup>

### The Integrated Resource Plan (IRP)

CAISO develops a coordinated grid management plan to integrate the generation and storage capacities of LSEs, called the Integrated Resource Plan (IRP). The IRP is a comprehensive planning document that outlines CAISO's forecasts for electricity demand, supply, and transmission needs over a 20-year planning horizon, as well as its strategies for integrating renewable energy resources and other grid services to meet those needs. The plan is developed in collaboration with LSEs, regulators, and other stakeholders, and is updated periodically to reflect changes in the energy landscape and evolving policy goals. Overall, the IRP plays a critical role in ensuring the reliability and resilience of California's electricity grid as the state continues to transition to a cleaner and more sustainable energy system.

<sup>12</sup> California Independent System Operator, June 14, 2022, "A golden age of energy storage," <https://www.caiso.com/about/news/a-golden-age-of-energy-storage-2>, accessed September 18, 2024.

<sup>13</sup> California Public Utilities Commission, December 1, 2022, CPUC Creates New Framework to Advance California's Transition Away From Natural Gas, <https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-creates-new-framework-to-advance-california-transition-away-from-natural-gas>, accessed September 18, 2024.

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When an individual battery energy storage (BES) facility or generation infrastructure (i.e., solar panels) comes online in California, it is typically included in the IRP through a process known as the Interconnection Queue. The Interconnection Queue is managed by the CAISO, which oversees the operation of the State's electricity grid.

### The Interconnection Queue

The Interconnection Queue is an application process that functions as a waiting list of proposed electricity generation and storage projects that are seeking to connect to the grid. When a new BES facility or generation infrastructure is proposed, the developer submits an application to CAISO to request an interconnection to the grid. CAISO evaluates the application to ensure that the facility meets technical and operational requirements, such as voltage regulation and frequency response, and that it can be integrated effectively into the grid.

Once the BES facility or generation infrastructure is approved by CAISO, it is assigned a point of interconnection on the grid, and its output is added to the IRP as a resource that can provide electricity and other grid services, such as frequency regulation or ramping support. The facility is then dispatched by CAISO based on its bids into the day-ahead and real-time electricity markets, and its output is used to help balance supply and demand on the grid in real-time.

Overall, the Interconnection Queue is an important mechanism for integrating new BES facilities and other electricity resources into the California grid, and for ensuring that the grid remains reliable and resilient as the state continues to transition to a cleaner and more sustainable energy system.

## Regional Regulations

### *Plan Bay Area 2050*

The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 on October 21, 2021.<sup>14</sup> Plan Bay Area 2050 provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of SB 375. Under the Plan Bay Area 2050 strategies, just under half of all Bay Area households would live within one half mile of frequent transit by 2050, with this share increasing to over 70 percent for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. GHG emissions from transportation would decrease significantly as a result of these transportation and land

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<sup>14</sup> Association of Bay Area Governments/Metropolitan Transportation Commission, October 2021, Plan Bay Area 2050. [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed September 18, 2024.

use changes, and the Bay Area would meet the state mandate of a 19-percent reduction in per-capita emissions by 2035 — but only if all strategies are implemented.<sup>15</sup>

To achieve MTC's/ABAG's sustainable vision for the Bay Area, the Plan Bay Area land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. Parts of the EIR Study Area lies within the Railroad Corridor PDA.<sup>16</sup>

### *Bay Area Clean Air Plan*

BAAQMD adopted the 2017 Clean Air Plan, Spare the Air, Cool the Climate on April 19, 2017. The 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.<sup>17</sup>

A comprehensive multipollutant control strategy has been developed to be implemented in the next 3 to 5 years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, toxic air contaminants, and GHG from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; and 8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of “super-GHGs” such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).

<sup>15</sup> Association of Bay Area Governments/Metropolitan Transportation Commission, October 2021, Plan Bay Area 2050. [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed September 18, 2024.

<sup>16</sup> Association of Bay Area Governments/Metropolitan Transportation Commission, January 2024 (updated), Priority Development Areas, [https://opendata.mtc.ca.gov/datasets/5572ccb7bfe2426eae086c35931f1d0e\\_0/explore?location=37.503733%2C-122.264927%2C14.44](https://opendata.mtc.ca.gov/datasets/5572ccb7bfe2426eae086c35931f1d0e_0/explore?location=37.503733%2C-122.264927%2C14.44).

<sup>17</sup> Bay Area Air Quality Management District, 2017, Spare the Air: Cool the Climate, Final 2017 Clean Air Plan, [https://www.baaqmd.gov/~/\\_media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_-proposed-final-cap-vol-1-pdf.pdf?la=en](https://www.baaqmd.gov/~/_media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en), accessed September 18, 2024.

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- Increase efficiency of the energy and transportation systems.
- Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the energy system.
  - Make the electricity supply carbon-free.
  - Electrify the transportation and building sectors.

### City/County Association of Governments of San Mateo County

The City/County Association of Governments (C/CAG) of San Mateo County is responsible for providing countywide transportation planning. In San Mateo County, C/CAG is the Congestion Management Agency tasked with preparing the Congestion Management Plan (CMP) that describes the strategies to address congestion problems and monitoring compliance. C/CAG works cooperatively with MTC, transit agencies, local governments, Caltrans and BAAQMD. C/CAG's latest congestion management program (CMP) is the 2023 San Mateo County CMP Update adopted October 2023.<sup>18</sup> C/CAG's countywide transportation model must be consistent with the regional transportation model developed by the MTC with ABAG data and is used to help evaluate cumulative transportation impacts of local land use decisions on the CMP system. In addition, C/CAG's updated CMP includes multimodal performance standards, trip reduction programs, and transportation demand management (TDM) strategies consistent with the goal of reducing regional VMT in accordance with SB 375.

### San Mateo County's Alternative Fuel Readiness Plan

The Alternative Fuel Readiness Plan (AFRP) for San Mateo County provides a resource regarding the increased use and incorporation of alternative fuel vehicles and alternative fuel infrastructure in communities within San Mateo County. This AFRP provides an overview of each alternative fuel in the marketplace and presents the motivations for having an AFRP, including existing legislation and incentives, environmental benefits, and economic factors.

## Local Regulations

### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.5.3, *Impact Discussion*.

### *City of San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and

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<sup>18</sup> City/County Association of Governments of San Mateo County, October 2023, *San Mateo County Congestion Management Plan*, <https://ccag.ca.gov/wp-content/uploads/2024/02/CCAGCMP2023Final-wAppendix.pdf>, accessed September 11, 2024.

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Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to energy as follows:

- Chapter 15.16, *Streamlined Permitting Process for Small Residential Rooftop Solar Systems*, allows for an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 to achieve timely and cost-effective installations of small residential rooftop solar energy systems.
- Chapter 15.04, *Technical Building Codes*, adopts the Title 24, Part 6, the California Energy Code (2022 Edition) and Title 24, Part 11, CALGreen.
- Chapter 8.60, *Mandatory Organic Waste Disposal Reduction*, lists requirements for organic waste generators, in compliance with state recycling laws, state organic recycling laws, and Short-Lived Climate Pollutant Reduction Act of 2016 to reduce solid waste generated in their jurisdictions.
- Chapter 15.20, *Streamlined Permitting Process for Electric Vehicle Charging Stations*, promotes the use of electric vehicles by creating an expedited, streamlined permitting process for electric vehicle charging stations while promoting public health and safety on the installation and use of such charging stations.

### *Climate Mitigation and Adaptation Plan*

Adopted in September 2021, the City of San Carlos 2021 Climate Mitigation and Adaptation Plan (CMAP) is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the city.<sup>19</sup> This CMAP is an update of the 2009 Climate Action Plan, providing updated information, an expanded set of GHG reduction strategies, climate adaptation strategies, and a planning horizon out to 2050.

The CMAP allows City decision-makers, staff, and the community to understand the sources and magnitude of local GHG emissions and identifies future strategies that, if implemented, will allow the community to achieve its emissions-reductions targets. In conjunction with existing local and state programs, these CMAP strategies provide a flexible path to reduce the community's GHG emissions to 107,920 MTCO<sub>2</sub>e by 2030 (49 percent below 2005 levels) and 36,060 MTCO<sub>2</sub>e by 2050 (83 percent below 2005 levels). The City's GHG reduction targets are to reduce emissions to 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050, at a minimum. To ensure that the implementation process is efficient, the CMAP includes a work plan that identifies responsible departments, partners, time frames, and relative costs associated with each strategy.

<sup>19</sup> City of San Carlos, September 2021, *2021 Climate Mitigation and Adaptation Plan*, <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/City%20Manager/Sustainability/Climate%20Action/CMAP%20Final.pdf>, accessed September 11, 2024.

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### 4.5.1.2 EXISTING CONDITIONS

#### Electricity and Natural Gas

Electricity is quantified using kilowatts (kW) and kilowatt-hours (kWh), and natural gas is measured in therms. A therm is a measurement of the amount of heat energy in natural gas, equal to 100,000 British thermal units (BTUs). The volumetric billing unit used for natural gas delivered to customers is typically expressed in hundreds of cubic feet (Ccf)—approximately 0.01 therm per Ccf—or thousands of cubic feet (Mcf)—approximately 10.37 therms per Mcf.<sup>20</sup> A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for one hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. According to the CEC’s “Tracking Progress” regarding statewide energy demand, total electric energy usage in California was 287,826 gigawatt hours in 2022.<sup>21</sup> A gigawatt is equal to one million kilowatts.

#### Energy Providers

Two energy providers, Peninsula Clean Energy (PCE) and Pacific Gas & Electric (PG&E), serve end users in the EIR Study Area, as described below.

##### *Peninsula Clean Energy*

PCE was created as a Community Choice Aggregation program by San Mateo County in 2016 and all of its cities and town.<sup>22</sup> PCE aims to provide electricity that is 100 percent renewable or carbon-free by 2025. PCE provides two different production options for electricity: ECOplus (default option) and ECO100 (100 percent renewable product).

Sources of electricity sold by PCE under the ECOplus plan in 2023, the latest year for which data are available, were:<sup>23</sup>

- 51.7 percent renewable, consisting mostly of solar and wind.
- 48.3 percent large hydroelectric.

Customers are automatically enrolled in ECOplus but have the option of opting up to ECO100, which provides 100 percent renewable and carbon-free electricity.<sup>24</sup> Conversely, customers have the option to opt out of PCE renewable energy sources and receive their energy service from PG&E. PG&E is

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<sup>20</sup> United States Energy Information Administration, 2024, Frequently Asked Questions (FAQs), <https://www.eia.gov/tools/faqs/faq.php?id=45&t=7>, accessed September 18, 2024.

<sup>21</sup> California Energy Commission, Electricity Consumption by Planning Area, <http://www.ecdms.energy.ca.gov/elecbyplan.aspx>, accessed September 18, 2024.

<sup>22</sup> Peninsula Clean Energy, Background, <https://www.peninsulacleanenergy.com/background/>, accessed September 18, 2024.

<sup>23</sup> Peninsula Clean Energy, Energy Mix, <https://www.peninsulacleanenergy.com/power-mix/>, accessed September 18, 2024.

<sup>24</sup> Peninsula Clean Energy, Energy Choices, <https://www.peninsulacleanenergy.com/energy-choices/>, accessed September 18, 2024.



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responsible for maintaining transmission lines, handling customer billing, and responding to new service requests and emergencies within the PCE service area.

### *Pacific Gas and Electric Company*

#### Electricity

PG&E is a publicly traded utility company which generates, purchases, and transmits energy and natural gas under contract with CPUC. PG&E's service territory is 70,000 square miles, roughly extending north to Eureka, south to Bakersfield, west to the Pacific Ocean, and east to the Sierra Nevada mountain range. PG&E's electricity distribution system consists of 106,681 circuit-miles of electric distribution lines and 18,466 circuit-miles of interconnected transmission lines.<sup>25</sup> PG&E owns and maintains above-ground networks of electric transmission and distribution facilities throughout the city.

PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydroelectric dams, as well as newer sources of energy, such as wind turbines and photovoltaic plants, also known as solar farms. The bulk electric grid (collectively referred to as "the grid") is a network of high-voltage transmission lines linked to power plants within the PG&E system. The distribution system, consisting of lower voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

#### Natural Gas

PG&E gas transmission pipeline systems serve approximately 4.5 million gas customers in northern and central California.<sup>26</sup> The system is operated under an inspection and monitoring program. The system operates in real time on a 24-hour basis, and includes leak inspections, surveys, and patrols of the pipelines. PG&E also adopted the Pipeline 2020 program, which aims to modernize critical pipeline infrastructure, expand the use of automatic or remotely operated shut-off valves, catalyze development of next-generation inspection technologies, develop industry-leading best practices, and enhance public safety partnerships with local communities, public officials, and first responders. Total natural gas consumption in PG&E's service area was 442,163,006,000 kilo-BTU (KBTU) for 2022.<sup>27</sup>

In 2022, approximately 38 percent of PG&E's energy generated came from renewable resources including biopower, geothermal, small hydroelectric, solar, and wind power. PG&E's portfolio consisted of 49 percent nuclear generation, 8 percent large hydroelectric facilities, and 5 percent natural gas.<sup>28</sup>

<sup>25</sup> Pacific Gas and Electric Company, 2024, Company profile, <https://www.pge.com/en/about/company-information/company-profile.html>, accessed September 18, 2024.

<sup>26</sup> Pacific Gas and Electric Company, 2024, Company profile <https://www.pge.com/en/about/company-information/company-profile.html>, accessed September 18, 2024.

<sup>27</sup> California Energy Commission, Gas Consumption by Entity, <https://ecdms.energy.ca.gov/gasbyutil.aspx>, accessed September 18, 2024.

<sup>28</sup> Pacific Gas & Electric Company, 2024, Clean Energy Solutions, <https://www.pge.com/en/about/corporate-responsibility-and-sustainability/taking-responsibility/clean-energy-solutions.html>, accessed September 18, 2024.

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PG&E and PCE together provide electrical services to users in the EIR Study Area. PG&E is the sole provider of natural gas services in the city. PG&E provides distribution of electrical services in the city, while PCE provides the electrical commodity. PCE works in conjunction with PG&E to provide electricity to consumers through the use of PG&E's distribution infrastructure and network. Both utilities are regulated by CPUC.

The existing electricity and natural gas consumption attributable to nonresidential and residential land uses in the EIR Study Area is shown in Table 4.5-1, *Estimated Existing Electricity and Natural Gas Demand*.

**TABLE 4.5-1 ESTIMATED EXISTING ELECTRICITY AND NATURAL GAS DEMAND**

Parameter	Electricity Usage (kWh/year) <sup>a</sup>	Natural Gas Usage (Therms/year) <sup>a</sup>
Residential	66,307,811	5,695,217
Nonresidential	108,796,274	2,527,969
<b>Total</b>	<b>175,104,085</b>	<b>8,223,187</b>
2024 Service Population <sup>b</sup>	51,610	
<b>Per Service Population Consumption</b>	<b>3,393</b>	<b>159</b>

Notes:

a. Based on 5-year average electricity and natural gas usage data provided by PG&E and PCE.

b. Service population = residents + jobs.

Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

## Fuel Consumption

California is one of the top producers of petroleum in the nation, with drilling operations throughout the state. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay Area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received in ports in Los Angeles, Long Beach, and the San Francisco Bay Area. Crude oil production in California and Alaska is in decline, and California refineries have become increasingly dependent on foreign imports.<sup>29</sup> Since 2012, foreign supplies, led by Saudi Arabia through 2019, Ecuador in 2020 and 2021, and Iraq in 2022, provide over half of the crude oil refined in California.<sup>30</sup> According to the United States Energy Information Administration, California's field production of crude oil has steadily declined since the mid-1980s with a total production of approximately 118 million barrels in 2023.<sup>31</sup>

<sup>29</sup> California Energy Commission, Annual Oil Supply Sources to California Refineries, <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/annual-oil-supply-sources-california>, accessed September 18, 2024.

<sup>30</sup> California Energy Commission, Foreign Sources of Crude Oil Imports to California <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/foreign-sources-crude-oil-imports>, accessed September 18, 2024.

<sup>31</sup> United States Energy Information Administration, August 30, 2024, Petroleum & Other Liquids, Crude Oil Production, [https://www.eia.gov/dnav/pet/pet\\_crd\\_crpdn\\_adc\\_mbbbl\\_a.htm](https://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbbbl_a.htm), accessed September 18, 2024.

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California stretches two-thirds of the way up the United States West Coast and with such great distances to travel, transportation accounts for the largest share of the state's energy consumption.<sup>32</sup> Californians have more registered motor vehicles and travel more vehicle miles than residents in any other state.<sup>33</sup> Overall, the state's transportation sector accounts for nearly two-fifths (i.e., 2,916 trillion BTUs) of California's total energy consumption and uses about 85 percent of the petroleum consumed in the state.<sup>34</sup> In San Mateo County, approximately 265 million gallons of gasoline and 15 million gallons of diesel fuel were sold in 2022.<sup>35</sup>

Table 4.5-2, *Existing Operation-Related Annual Fuel Consumption*, shows the estimated annual fuel consumption currently generated under existing baseline conditions. Fuel consumption is based on VMT from vehicle trips beginning and ending in the EIR Study Area and from external/internal trips (i.e., trips that either begin or end in the EIR Study Area).

**TABLE 4.5-2 EXISTING OPERATION-RELATED ANNUAL FUEL CONSUMPTION**

Gas (gal/year)	Diesel (gal/year)	Compressed Natural Gas (gal/year)	Electricity (kWh/year)
9,597,866	740,431	33,903	5,459,817

Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

### 4.5.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant energy impact if it would:

- ENE-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- ENE-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
- ENE-3 In combination with past, present, and reasonably foreseeable projects, result in cumulative energy impacts in the area.

<sup>32</sup> United States Energy Information Administration, 2022, State Energy Data System, Table C1, Energy Consumption Overview: Estimates by Energy Source and End-Use Sector, 2022, [https://www.eia.gov/state/seds/sep\\_sum/html/sum\\_btu\\_1.html](https://www.eia.gov/state/seds/sep_sum/html/sum_btu_1.html), accessed September 18, 2024.

<sup>33</sup> United States Department of Transportation, January 1, 2022, Federal Highway Administration, Highway Statistical Series: State Statistical Abstracts, California, <https://rosap.nhtl.bts.gov/view/dot/74141>, accessed September 18, 2024.

<sup>34</sup> United States Energy Information Administration, May 16, 2024, California State Energy Profile, <https://www.eia.gov/state/print.php?sid=CA>, accessed September 18, 2024.

<sup>35</sup> California Energy Commission, August 16, 2023, *2022 California Annual Retail Fuel Outlet Report Results (CEC-A15)*, <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>, accessed September 18, 2024.

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### 4.5.3 IMPACT DISCUSSION

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ENE-1	The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
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#### Construction

Future development projects within the buildout horizon of the proposed project 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 most 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 future construction activities.

Future construction activities would also temporarily increase demands for energy associated with transportation. Transportation energy use depends on the type and number of trips, VMT, 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 most 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 would be required to minimize nonessential idling of construction equipment during construction in accordance with the California Code of Regulations Title 13, Chapter 9, Article 4.8, Section 2449. Such required practices would limit wasteful and unnecessary energy consumption.

Also, future projects within the EIR Study Area would be similar to projects recently constructed and currently in development within the EIR Study Area. Overall, there would be no unusual project characteristics anticipated that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of California. Therefore, short-term construction activities that occur as a result of implementation of the proposed project are not anticipated to result in inefficient, wasteful, or unnecessary energy consumption and impacts would be *less than significant*.

#### Operation

##### *Decreasing Overall Per Capita Energy Consumption*

Operation of future development projects 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-

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site equipment and appliances; lighting; and charging electric vehicles. Future projects would also result in additional demands for transportation fuels (e.g., gasoline, diesel, compressed natural gas, and electricity) associated with on-road vehicles.

### Building Electricity

Electrical service to the EIR Study Area is provided by PG&E and PCE through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 4.5-3, *Year 2045 Forecast Electricity Consumption*, by horizon year 2045, electricity use in the EIR Study Area would increase by 139,929,443 kWh/year, or approximately 54 percent, from existing conditions.

**TABLE 4.5-3 YEAR 2045 FORECAST ELECTRICITY CONSUMPTION**

Land Use	Electricity Usage (kWh/year) <sup>a</sup>		
	Existing Conditions	Proposed Project	Net Change
Nonresidential	108,796,274	207,139,460	98,343,186
Residential	66,307,811	107,894,068	41,586,257
<b>Total</b>	<b>175,104,085</b>	<b>315,033,528</b>	<b>139,929,443</b>
<b>Service Population</b>	51,610	93,770	42,160
<b>Per Service Population Annual Consumption</b>	<b>3,393</b>	<b>3,360</b>	<b>(33)</b>

Note:

a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

As shown in Table 4.5-3, the per service population electricity consumption is estimated to decrease from 3,393 kWh per person per year in 2024 to 3,360 kWh per person per year in 2045, or a reduction of approximately 33 kWh annually. The 2045 electricity consumption estimates reflect the electricity consumption rates of the existing community which is made up of a building stock that consists of varying ages and energy efficiency performances. The EIR Study Area is largely built out and net new development would largely occur through the renovation, expansion, and replacement of existing development. All new development facilitated by the proposed project would be required to demonstrate compliance with the California Building Energy Efficiency Standards and CALGreen standards in effect at the time the individual development applications are submitted and can therefore be expected to be more energy-efficient than the use being replaced, resulting in reductions in building electricity consumption on a per dwelling unit and per square foot basis when compared to existing development. It should be noted that it is unknown how much more energy-efficient future iterations of the California Building Energy Efficiency Standards and CALGreen would be in 2045 compared to existing conditions as those code updates are released on a 3-year cycle. In addition, SCMC Chapter 15.04 requires many new construction projects to be designed all-electric; however, it is unknown at this time to what extent this requirement would be placed on new construction projects due to the varying exceptions that could apply. Therefore, compliance with this ordinance is not accounted for in the building energy calculations herein.

The Land Use (LU) Element and Environmental Management (EM) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development

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decisions to consider impacts to energy, including use and efficiency. The following General Plan goals and policies would serve to improve energy efficiency and reduce energy:

- **Goal LU-8:** Ensure excellence in all development design.
  - **Policy LU-8.18:** Encourage “green building” practices in new development and redevelopment, such as those that make a building more energy efficient and reduces its effect on human health and the environment through better siting, design, construction, maintenance and operation.
- **Goal EM-9:** Reduce energy consumed citywide.
  - **Policy EM -9.1:** Provide assistance and support efforts for increased energy efficiency for businesses and residences through a combination of incentives and regulations.
  - **Policy EM -9.2:** Support on-site generation of energy through alternative forms of energy production such as solar panels, wind turbines and biomass facilities.
  - **Policy EM -9.5:** Design all new construction and major remodels of government agency buildings to relevant green building standards.
  - **Policy EM -9.6:** Encourage new private construction and major remodels to be designed to meet or exceed Green Uniform Building Code requirements.
  - **Policy EM -9.7:** Implement energy efficiency in City-owned and -operated facilities to reduce municipal energy costs and serve as a model for the community.

As a result of compliance with California Building Energy Efficiency Standards and implementation of the above General Plan goals and policies, per service population building electricity consumption is expected to decrease in 2045 compared to existing conditions.

### Building Natural Gas

As shown in Table 4.5-4, *Year 2045 Forecast Natural Gas Consumption*, natural gas use under the proposed project is estimated to total 14,080,138 therms annually. While the City currently has a reach code requiring all-electric building designs for most new projects (SCMC Section 4.106.5), it cannot be guaranteed that every individual development project facilitated by the proposed project would be subject to this requirement. To provide a conservative assessment of potential energy consumption in 2045, new building space is assumed to include natural gas for space and water heating for the purposes of this analysis. With this assumption, by 2045, natural gas use in the EIR Study Area would increase by 5,856,952 therms annually, or approximately 71 percent, from existing conditions. As a result, the per service population natural gas consumption is estimated to slightly decrease from 159 therms per person per year in 2024 to 150 therms per person per year in 2045 for natural gas. As described above, this number can be considered to represent a conservative (i.e., “worst case” scenario) as many future development projects would be subject to the reach code’s all-electric requirements.

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**TABLE 4.5-4 YEAR 2045 FORECAST NATURAL GAS CONSUMPTION**

Land Use	Natural Gas Usage (Therms per year) <sup>a</sup>		
	Existing Conditions	Proposed Project	Net Change
Nonresidential	2,527,969	4,813,053	2,285,083
Residential	5,695,217	9,267,085	3,571,868
<b>Total</b>	<b>8,223,187</b>	<b>14,080,138</b>	<b>5,856,952</b>
<b>Service Population</b>	51,610	93,770	42,160
<b>Per Service Population Annual Consumption</b>	159	150	(9)

Note: Totals may not add up due to rounding.

a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR

Similar to electricity consumption, all future development would be required to demonstrate compliance with the current California Building Energy Efficiency Standards and CALGreen and would result in reductions in heating fuel (i.e., natural gas or propane) consumption on a per dwelling unit and per square foot basis when compared to existing development in the EIR Study Area. Moreover, General Plan Policy LU-8.18 and Policy EM-9.2 would serve to improve energy efficiency and reduce natural gas consumption in future development facilitated by the proposed project. As a result of continued compliance with energy efficiency standards from the State and City, per service population heating fuel consumption is expected to decrease in 2045 compared to existing conditions greater than what is shown in Table 4.5-4.

### Transportation Energy

The growth accommodated under the proposed project would consume transportation energy from the use of motor vehicles (e.g., gasoline, diesel, compressed natural gas, electricity). As shown in Table 4.5-5, *Year 2045 Forecast Fuel Consumption*, implementation of the proposed project would increase transportation fuel consumption from 10,372,200 gallons per year and 5,459,817 kWh per year in 2024 to 14,168,234 gallons per year and 21,508,783 kWh per year in 2045 in the EIR Study Area, or an increase of approximately 37 percent for transportation fuels such as gasoline, diesel, and natural gas and approximately 294 percent for transportation electricity. Service population would also increase under the proposed project, from approximately 51,610 people to 93,770 people, or an increase of approximately 82 percent. Largely as a result of the growth in population and VMT combined with the increasing countywide fleet mix of electric vehicles through 2045, per service population fuel consumption would decrease from 171 gallons per person per year in 2024 to 151 gallons per person per year in 2045 and per service population transportation electricity consumption would increase from 90 kWh per person per year in 2024 to 229 kWh per person per year in 2045.

Varying conditions influence fuel consumption, such as vehicle fuel type and fuel economy, in addition to market trends toward accelerated electric vehicle adoption and resident commuter behavior in response to the land use pattern (e.g., whether jobs are close to the employee's residence). As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed project would reduce VMT per service population and therefore increase the efficiency associated with automobile usage.

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**TABLE 4.5-5 YEAR 2045 FORECAST FUEL CONSUMPTION**

	Existing Conditions	Proposed Project	Net Change
<b>Gasoline</b>			
Gallons/year	9,597,866	13,359,778	3,761,912
<b>Diesel</b>			
Gallons/year	740,431	778,429	37,999
<b>Compressed Natural Gas</b>			
Gallons/year	33,903	30,027	(3,876)
<b>Electricity</b>			
Kilowatt-hours/year	5,459,817	21,508,783	16,048,967
<b>Total Gallons/Year</b>	<b>10,372,200</b>	<b>14,168,234</b>	<b>3,796,035</b>
<b>Total kWh/Year</b>	<b>5,459,817</b>	<b>21,508,783</b>	<b>16,048,967</b>
Service Population (SP)	51,610	93,770	33,180
<b>Gallons/SP</b>	<b>201</b>	<b>151</b>	<b>(50)</b>
<b>kWh/SP</b>	<b>106</b>	<b>229</b>	<b>124</b>

Note: Daily vehicle miles traveled (VMT) is provided by Kittelson and Associates, Inc. 2024 and was used with San Mateo County fleet mix and fuel consumption estimates to calculate fuel consumption for the proposed project. Accounting of fuel consumption is based on the recommendations of California Air Resources Board's Regional Targets Advisory Committee created under Senate Bill 375 for multiplying daily VMT by 347 days per year. Source: Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

Furthermore, the average vehicle fuel economy would improve between 2024 and 2045 as vehicle manufacturers comply with CAFE standards and other fuel economy standards, resulting in lower transportation energy consumption per mile traveled. Therefore, it is anticipated that, per person, transportation energy consumed would decrease over time as vehicles' fuel efficiency improves.

As shown in Table 4.5-3 and Table 4.5-4, the proposed project would result in a decrease in per service population electricity consumption rate of approximately 33 kWh per year in buildings and a slight decrease in per service population natural gas consumption rate of approximately 9 therms per year. Moreover, as shown in Table 4.5-5, per service population transportation fuel consumption would decrease by an estimated 50 gallons per year and increase by an estimated 124 kWh per year from 2024 to 2045. While the increase in transportation electricity would be substantial, it does not imply the consumption of those energy resources would be wasteful, inefficient, or unnecessary as they would be associated with the transportation needs of residents and employees in San Carlos.

### *Decreasing Reliance on Fossil Fuels*

The proposed project would be considered to conflict with this criterion if it did not take steps to decrease the reliance on fossil fuels. As discussed in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR, individual development projects under the proposed project would be required to comply with the CBSC current at the time of their building application submittal, including the California Building Energy Efficiency Standards and CALGreen. As the current CBSC is the 2022 CBSC, individual development projects going through the application process today would result in greater energy efficiency than the current performance of existing structures in the EIR Study Area. In addition, the 2022 CBSC currently includes prescriptive measures for development projects to include rooftop photovoltaic systems and



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BES infrastructure or demonstrate energy efficiency performance equivalent to including photovoltaic and BES features.

In addition to improvements in energy efficiency and on-site renewable energy generation and energy storage standards, SB 100 requires that LSEs incrementally increase their energy procurement sources to include eligible renewable and carbon-free sources. By January 1, 2046, all LSEs in California are required to source 100 percent of their in-state electricity sales from renewable and carbon-free sources. As a result, individual development projects accommodated by the proposed project would improve their energy efficiency through compliance with the CBSC current at the time of their building application submittal and LSEs would supply electricity that is increasingly sourced from carbon-free sources. Moreover, consistent with Executive Order N-79-20 and CARB's Advanced Clean Cars II Regulation, which require that 100 percent of in-state vehicle sales starting in 2035 are electric or hybrid electric, vehicles utilized by future residents and employees accommodated by the proposed project are expected to consist more of EVs than what is experienced under existing conditions. Specifically, General Plan Policy EM-9.2 and Policy LU-8.18, listed above, encourages the reduction of nonrenewable energy use and improvement of energy efficiency. As a result, the proposed project would incrementally decrease reliance on fossil fuel energy resources through 2045.

### *Increasing Reliance on Renewable Energy*

As discussed above, the 2022 CBSC currently includes provisions for development projects to include rooftop photovoltaic systems and BES infrastructure or demonstrate energy efficiency performance equivalent to including photovoltaic and BES features. In addition, it is anticipated that each new code cycle for the CBSC improves on the last one and requires higher performance for energy efficiency and incorporates additional requirements for on-site renewable energy and EV charging infrastructure. Future development projects would therefore result in a net increase from existing conditions in on-site photovoltaic electricity generation and EV charging stations and associated infrastructure, further supporting and accelerating the adoption of EVs and the use of renewable energy in future years.

Similarly, LSEs that serve future development projects, such as PG&E and PCE, would be required to incrementally increase their energy procurement sources to include eligible renewable and carbon-free sources through 2045 under SB 100. As a result, electricity consumed by individual development projects as well as existing structures in the EIR Study Area would rely more on renewable and carbon-free sources for electricity in future years than is experienced under existing conditions.

Moreover, the Land Use (LU) Element, Circulation & Scenic Highways (CSH) Element, and Environmental Management (EM) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to energy, including renewable energy. The following General Plan goals and policies would serve to support the use of renewable energy beyond compliance with the CBSC, including creating a walkable urban environment to encourage future residents and employees in the EIR Study Area to use active modes of transportation instead of motorized vehicles to minimize VMT:

- **Goal LU-1:** Ensure sustainable land use pattern.

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- **Policy LU-1.3:** Ensure that development within the TOD corridor maintains and improves the mobility of people and vehicles along and across the corridor.
- **Goal CSH-3:** Maintain a street and highway system which accommodates future growth while maintaining acceptable levels of service.
  - **Policy CSH-3.4:** Support Smart Growth and Sustainability principles to reduce travel time from housing to jobs, provide affordable transportation to all members of the community, allow compact mixed-use development and decrease dependency on automobiles.
- **Goal CSH-6:** Integrate transportation and land use.
  - **Policy CSH-6.2:** Support transit-oriented development with mixed, dense land use that reduces the need to travel and that is linked to good transit. The City shall work with local, regional and State representatives to encourage the support and funding of transit oriented development projects.
- **Goal EM-11:** Promote and expand public and alternative modes of transportation.
  - **Policy EM-11.4:** Provide an integrated network of bicycle and pedestrian thoroughfares that connects jobs and housing to other city destinations, as recommended in the San Carlos Bicycle and Pedestrian Master Plan.
  - **Policy EM-11.6:** Encourage employers to incentivize employee use of mass transit and alternative modes of transportation.
  - **Policy EM-11.7:** Support programs to reduce vehicle trips associated with transporting students to and from schools.
  - **Policy EM-11.11:** Amend the Zoning Ordinance to create a Transportation Demand Management (TDM) Ordinance that contains strategies to reduce vehicle trips.

## Summary

Compliance with federal, State, and local regulations (e.g., Building Energy Efficiency Standards, CALGreen, Renewables Portfolio Standard, 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 goals and policies related to land use and transportation planning and design, energy efficiency, public and active transit, and renewable energy generation identified above will further contribute to minimizing building, transportation-related energy, and nonrenewable sources of energy demands. As stated, future development within the buildout horizon of the proposed project would reduce the per capita transportation energy consumption, decrease reliance on fossil fuels, and increase reliance on renewable energy sources.

Implementation of policies in the proposed project, in conjunction with and complementary to regulatory requirements, would ensure that energy demand associated with growth under the proposed project would decrease overall energy consumption, decrease reliance on fossil fuels, and increase reliance on renewable energy. As such, the energy consumption under the proposed project would not

be considered inefficient, wasteful, or unnecessary. Therefore, energy impacts associated with the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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ENE-2	The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
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## 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. In general, California has RPS requirements of 33 percent renewable energy by 2020 (SB X1-2), 40 percent by 2024 (SB 350), 50 percent by 2026 (SB 100), 60 percent by 2030 (SB 100), 90 percent by 2035 (SB 1020), 95 percent by 2040 (SB 1020), 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. Additionally, SB 1020 requires all State agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as PG&E and PCE, whose compliance with RPS requirements would contribute to the State of California objective of transitioning to renewable energy. In addition, customers are automatically enrolled in the PCE's ECOplus program which uses approximately 50 percent renewable energy and 100 percent clean energy.<sup>36</sup> Even if customers in the EIR Study Area were to opt out of the ECOplus program, and therefore receive all their electricity from PG&E, approximately 38 percent of PG&E's electricity was generated from renewable energy resources in 2022.<sup>37</sup> PG&E is set to meet the State's new 60 percent renewable energy mandate set forth in SB 100 and has committed to net zero energy system in 2040, which is five years ahead of California's current carbon neutrality goal.<sup>38</sup>

As listed in impact discussion ENE-1, the proposed project includes goals and policies that would contribute to minimizing inefficient, wasteful, or unnecessary transportation energy consumption, and ensure compliance with State, regional, or local plans for renewable energy. Lastly, future development projects would be required to comply with the current and future iterations of the Building Energy Efficiency Standards and CALGreen. Therefore, implementation of the proposed project would not conflict with or obstruct implementation of California's RPS program, and impacts would be *less than significant*.

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<sup>36</sup> Peninsula Clean Energy, 2024, Energy Choices, <https://www.peninsulacleanenergy.com/energy-choices/>, accessed October 15, 2024.

<sup>37</sup> Pacific Gas and Electric Company, 2024, Clean Energy Solutions, <https://www.pge.com/en/about/corporate-responsibility-and-sustainability/taking-responsibility/clean-energy-solutions.html#:~:text=PG&E%20is%20proud%20to%20deliver,nuclear%20and%20large%20hydroelectric%20power>, accessed October 15, 2024.

<sup>38</sup> Pacific Gas and Electric Company, 2024, PG&E's Climate Strategy Report, <https://www.pge.com/en/about/corporate-responsibility-and-sustainability/taking-responsibility.html>, accessed October 15, 2024.

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**Significance without Mitigation:** Less than significant.

### San Carlos Climate Mitigation and Adaptation Plan

As mentioned, the City's current CMAP was developed and adopted by City Council in September 2021 as a direct update to the 2009 CAP.<sup>39</sup> The CMAP provides community-wide emissions forecasts for 2030 and 2050, relying on growth assumptions from California Department of Finance and ABAG. This CMAP establishes higher GHG reduction targets than the 2009 CAP, with GHG emissions targets of 40 percent below 1990 levels (equal to 49 percent below 2005 levels) by 2030 and 80 percent below 1990 levels (or 83 percent below 2005 levels) by 2050. Future revisions to the CMAP may include more stringent GHG reduction targets as they are feasible and appropriate.

Because the proposed project does not alter any of the strategies within the CMAP, the proposed project would not conflict with the strategies in the CMAP or hinder implementation of the CMAP. Furthermore, as listed in impact discussion ENE-1, the proposed project includes goals and policies that would contribute to minimizing inefficient, wasteful, or unnecessary transportation energy consumption, and ensure compliance with State, regional, or local plans for renewable energy. Therefore, implementation of the proposed project would not conflict with or obstruct implementation of the CMAP, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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ENE-3	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative energy impacts in the area.
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Cumulative impacts would occur if a series of actions lead to a wasteful, inefficient, or unnecessary consumption of energy resources or a conflict with or obstruction of a State or local plan for renewable energy and energy efficiency.

All the development projects within the vicinity of the project's EIR Study Area are within the service area of PCE and PG&E. These projects would result in a long-term increase in operational energy demand for electricity and natural gas use associated with population growth. In addition, construction activities would require the use of energy for purposes such as the operation of construction equipment and tools, and construction of development projects may overlap. However, all projects developed within the PCE and PG&E service area would implement the requirements of the Building and Energy Efficiency Standards and the California Green Building Code. Furthermore, new buildings would use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations.

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<sup>39</sup> City of San Carlos, September 2021, *2021 Climate Mitigation and Adaptation Plan*, <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/City%20Manager/Sustainability/Climate%20Action/CMAP%20Final.pdf>, accessed September 11, 2024.

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Future development would also increase annual VMT, and thus fuel consumption. However, vehicles would be subject to the USEPA CAFE standards for vehicular fuel efficiency, and average corporate fuel economy continues to increase as a result of State and federal laws, including the Pavley Advanced Clean Cars program. Vehicle turnover also improves the overall fuel economy of California's vehicle fleets. The proposed project also includes goals and policies to reduce energy use as well as aligning with the state's goals for carbon neutrality. Cumulative impacts would therefore be *less than significant*.

**Significance without Mitigation:** Less than significant.

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## GEOLOGY AND SOILS

### 4.6 GEOLOGY AND SOILS

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to geology and soils, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.6.1 ENVIRONMENTAL SETTING

##### 4.6.1.1 REGULATORY FRAMEWORK

###### Federal Regulations

###### *Earthquake Hazards Reduction Act*

The Earthquake Hazards Reduction Act of 1977 was intended to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program. Pursuant to this Act, the National Earthquake Hazards Reduction Program was established, which designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program. Programs provide valuable resources to guide building code requirements and planning efforts such as emergency evacuation responsibilities and seismic code standards.

###### *Paleontological Resources Preservation Act*

The federal Paleontological Resources Preservation Act of 2002 (PRPA) limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency. Additionally, it specifies these researchers must agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and to other researchers. This act incorporates key findings of a report, *Fossils on Federal Land and Indian Lands*, issued by the Secretary of the Interior in 2000, that establishes that most vertebrate fossils and some invertebrate and plant fossils are considered rare resources.<sup>1</sup> 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, Bureau of Reclamation, National Park Service, United States Forest Service, and United States Fish and Wildlife Service, and provides the following:

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<sup>1</sup> United States Department of the Interior, May 2000, *Fossils on Federal & Indian Lands, Report of the Secretary of the Interior*, [https://www.blm.gov/sites/blm.gov/files/programs\\_paleontology\\_quick%20links\\_Assessment%20of%20Fossil%20Managemen%20on%20Federal%20%26%20Indian%20Lands%2C%20May%202000.pdf](https://www.blm.gov/sites/blm.gov/files/programs_paleontology_quick%20links_Assessment%20of%20Fossil%20Managemen%20on%20Federal%20%26%20Indian%20Lands%2C%20May%202000.pdf), accessed October 25, 2024.

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- 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

### *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 United States 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 Regulations

### *Alquist-Priolo Earthquake Fault Zoning Act*

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface fault rupture to structures used for human occupancy.<sup>2</sup> The main purpose of the act is to prevent the construction of buildings used for human occupancy on top of active faults. This act only addresses the hazard of surface fault rupture—not other earthquake hazards such as earthquake-induced liquefaction or landslides. The act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around surface traces of active faults and to issue appropriate maps. The maps, which are developed using existing United States Geological Survey's (USGS) 7.5-minute quadrangle map bases, are then distributed to all affected cities, counties, and State agencies for their use in planning and controlling new or renewed construction. Generally, construction within 50 feet of an active fault zone is prohibited.

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<sup>2</sup> California Department of Conservation, 2024, Alquist-Priolo Earthquake Fault Zoning Act, <https://www.conservation.ca.gov/cgs/alquist-priolo>, accessed October 25, 2024.



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### *Seismic Hazards Mapping Act*

The Seismic Hazards Mapping Act, which was passed in 1990, addresses seismic hazards such as liquefaction and seismically induced landslides.<sup>3</sup> Under this act, seismic hazard zones are mapped by the State Geologist to assist local governments in land use planning. Section 2691(c) of this act states that “it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety.” Section 2697(a) of the act states that “cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.”

### *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 to 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.

### *California Building Code*

The State of California provides a minimum standard for building design through Title 24 CCR Part 2, of, commonly referred to as the “California Building Code” (CBC). The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Chapter 16 of the CBC deals with general design requirements, including, but not limited to, regulations governing seismically resistant construction (Chapter 16, Division IV). Chapters 18 and A33 address excavations, foundations, retaining walls, and grading. These chapters include requirements for seismically resistant design, foundation investigations, stable cut-and-fill slopes and drainage and erosion control.

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<sup>3</sup> California Department of Conservation, 2019, Seismic Hazards Mapping Act, <https://www.conservation.ca.gov/cgs/hazards/seismic-hazards-mapping-act>, accessed October 25, 2024.

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### *California Environmental Quality Act*

Paleontological resources are afforded protection under the California Environmental Quality Act (CEQA). The Society of Vertebrate Paleontology has set significance criteria for paleontological resources.<sup>4</sup> Most practicing professional vertebrate paleontologists adhere closely to the Society of Vertebrate Paleontology's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most State regulatory agencies with paleontological laws, ordinances, regulations, and standards accept and use the professional standards set forth by the Society of Vertebrate Paleontology.

### *California Public Resources Code Section 5097*

California Public Resources Code (PRC) Section 5097.5 prohibits the destruction or removal of any paleontological site or feature from public lands without the permission of the jurisdictional agency.

### *California Penal Code Section 622.5*

The California Penal Code Section 622.5 details the penalties for damage or removal of paleontological resources, whether from private or public lands.

### *California General Plan Law and General Plan Guidelines*

State law (Government Code Section 65302) requires cities to adopt a comprehensive long-term general plan that includes a safety element. The safety element is intended to provide guidance for protecting the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; other seismic hazards identified by PRC Sections 2691 et. seq.; and other geologic hazards known to the legislative body. The seismic safety element must also include mapping of known seismic and geologic hazards from the California Geological Survey and a series of responsive goals, policies, and implementation programs to improve public safety.

### *Public Resources Code Section 5097.5 and Section 30244*

State requirements for management of paleontological resources are included in PRC Section 5097.5 and Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts on paleontological resources from developments on public (e.g., State, county, city, or district) lands.

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<sup>4</sup> Society of Vertebrate Paleontology, 2010, *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*, [https://vertpaleo.org/wp-content/uploads/2021/01/SVP\\_Impact\\_Mitigation\\_Guidelines.pdf](https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf), accessed October 25, 2024.

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### *Paleontological Assessment Standards*

The Society of Vertebrate Paleontology (SVP) has established guidelines for the identification, assessment, and mitigation of adverse impacts on nonrenewable paleontological resources. Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists. The SVP has helped define the value of paleontological resources and, in particular, indicates that geologic units of high paleontological potential are those from which vertebrate or significant invertebrate or plant fossils have been recovered in the past (i.e., are represented in institutional collections). Only invertebrate fossils that provide new information on existing flora or fauna or on the age of a rock unit would be considered significant. Geologic units of low paleontological potential are those that are not known to have produced a substantial body of significant paleontological material. As such, the sensitivity of an area with respect to paleontological resources hinges on its geologic setting and whether significant fossils have been discovered in the area or in similar geologic units.

### Regional Regulations

The purpose of hazard mitigation planning is to reduce the loss of life and property by minimizing the impact of disasters. The *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan* (MJHMP), updated in 2021 in accordance with the federal Disaster Mitigation Action of 2000 (DMA 2000), provides an assessment of natural hazards in the county and a set of short-term mitigation actions to reduce or eliminate the long-term risk to people and property from these hazards. The San Carlos Jurisdictional Annex of the MJHMP provides an assessment of hazards and vulnerabilities, and a set of mitigation actions for San Carlos specifically while considering the results from the countywide effort. In the context of an MJHMP, mitigation is an action that reduces or eliminates long-term risk to people and property from hazards, including geologic hazards.<sup>5</sup>

The MJHMP must be reviewed and approved by FEMA every five years to maintain eligibility for disaster relief funding. As part of this process, the California Governor's Office of Emergency Services reviews all local hazard mitigation plans in accordance with DMA 2000 regulations and coordinates with local jurisdictions to ensure compliance with FEMA's Local Mitigation Plan Review Guide. As part of the proposed project, the MJHMP is adopted in its entirety into the proposed Safety Element by reference.

### Local Regulations

#### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.6.3, *Impact Discussion*.

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<sup>5</sup> County of San Mateo, 2021, 2021 Multijurisdictional Local Hazard Mitigation Plan – Volume 2, <https://www.smcgov.org/media/53476/download?inline=1>, accessed on October 11, 2024.

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### *San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to geology and soils as follows:

- Chapter 13.04, *Sewer Connections*, requires all new construction to connect to the City of San Carlos sanitary sewer system. Wastewater from new lots or parcels would be discharged into the existing public sanitary sewer system serviced by the City.
- Chapter 15.04, *Technical Building Code*, of Title 15, *Buildings and Construction*, adopts the CBC by reference with specified modifications. Chapter 15.04 recognizes that the city is located in a seismically active area very close to the San Andreas Fault, one of the most significant earthquake fault zones in the State of California. This chapter also recognizes that there is the moderate potential for erosion and slope instability/landslides in approximately fifty percent of the city and that expansive soils or bedrock varies in significance in over two-thirds of the entire city. The city limit and Sphere of Influence (SOI) are in CBC Seismic Zone 4, as is about 45 percent of the State of California; consequently, construction within San Carlos would be required to meet the most stringent building code standards. Seismic zone designations range from zone 0 to zone 4. The ascending numbers indicate the respective increase in the required factor of safety applied to structural design equations for resisting earthquake-induced ground accelerations.
- Chapter 12.08, *Grading and Excavations*, of Title 12, *Streets, Sidewalks, and Public Places*, provides the minimum standards to protect property, preserve natural beauty and enhance water quality, and control erosion, sedimentation, increases in surface runoff and related environmental damage caused by construction-related activities, by regulating and controlling the design, construction, quality of materials, use, location and maintenance of grading, excavating and fill, land disturbances, land fill and soil storage in connection with the clearing and grading of land for construction, within the city.
- Chapter 17.36, *Improvements*, explains that sanitary sewer facilities connecting with the existing City sewer system shall be installed to serve each lot and to grades, location, design and sizes approved by the City Engineer.
- Chapter 18.12, *Hillside (H) Overlay District*. The purpose of this chapter is to protect the health, safety, and welfare of residents of the City by establishing regulations for managing the development of hillside areas. The chapter includes measures to minimize hazards due to soil erosion associated with development on hillsides.

For a complete discussion on soil erosion prevention as it relates to water quality, see Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR.

### *San Carlos Emergency Operations Plan*

The City Council adopted the City of San Carlos Emergency Operations Plan (EOP) in March 2022. The EOP establishes the emergency management structure utilized for prevention, protection, response, and recovery of emergencies affecting the city; the operational concepts and procedures associated with

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day-to-day field response to emergencies by City departments; and the policies and procedures for the San Carlos Emergency Center activities. The plan also identifies the policies, responsibilities, and procedures utilized to protect the health and safety of residents, public and private property, and the environmental effects of natural, technological, and man-made emergencies and disasters, as well as defines the procedures for a disaster recovery process.

### *San Carlos Soils Hazard Zones*

The City of San Carlos has two Soil Hazard Areas: Zone A and Zone B. Zone A is generally located in the flat lying topographic areas and Zone B is located in the hillier areas of San Carlos. Each Soil Hazard Area can determine how foundations are designed and, depending on the type of project, if a geotechnical investigation report is required. If a geotechnical investigation report is required, a foundation plan review letter is required to be submitted to the City prior to permit issuance. If a project is occurring in Hazard Zone B, an engineering geologic investigation/report may be required by the City geologist.<sup>6,7</sup>

## 4.6.1.2 EXISTING CONDITIONS

### Regional Geology

The City of San Carlos is located in northeastern San Mateo County, along the San Francisco Bay. The topography of the EIR Study Area includes moderate to steep slopes in the western neighborhoods and open space areas, sloping down to the eastern portion of the EIR Study Area near the San Francisco Bay. The geology within the EIR Study Area is mainly unconsolidated sedimentary deposits underlain by sedimentary rock and Franciscan bedrock west of Alameda de las Pulgas. The western border area of the city and its western SOI is underlain by the Cretaceous age Franciscan Complex consisting mainly of greywacke sandstone, conglomerate and shale bedrock.<sup>8,9,10,11</sup>

Conglomerate, sandstone, and mudstone of the Santa Clara formation underlie the transitional alluvial zone between the western hills and flatland deposits. The lowland deposits, which underlie most of San Carlos, consist mostly of the deposits of Holocene age alluvium (less than 11,000 years old) consisting of a mix of clay, silt, sand and gravel. Some older Pleistocene age deposits are also present, but with similar

<sup>6</sup> City of San Carlos, Soils Report for Hazard Zone B, <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/Community%20Development/Building/Building%20Permits/Forms%20And%20Handouts/Applications%20Forms%20and%20Checklists/Soils%20Report%20Information%20fB.pdf>, accessed on December 5, 2024.

<sup>7</sup> City of San Carlos, Soils Reports for Hazard Zone A, <https://cms3.revize.com/revize/sancarlos/Document%20Center/Soils%20Report%20Information%20f.pdf>, accessed on December 5, 2024.

<sup>8</sup> Oakeshott, G.B., *California's Changing Landscapes, A Guide to the Geology of the State*, 2nd edition, 1978.

<sup>9</sup> United States Geological Survey, Montara Mountain (1980), Palo Alto (1973), San Mateo (1980), and Woodside (1973), Quadrangles, California, 7.5 Minute Series (Topographic), scale 1:24,000.

<sup>10</sup> Wagner, D.L., E.J. Bortugno, and R.D. McJunkin, *Geologic Map of the San Francisco - San Jose Quadrangle - Map No. 5A (Geology)*, Regional Geologic Map Series, California Geological Survey (formerly the Division of Mines and Geology), Sacramento, California, 1990, 5 sheets, scale 1:250,000.

<sup>11</sup> Brabb, E.E., R.W. Graymer, and D.L. Jones, *Geology of the Onshore Part of San Mateo County, California: A Digital Database*, United States Geological Survey Open-File Report 98-137, 1998.

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compositions. The alluvium is several tens of feet to hundreds of feet thick at the Bay margins to the northeast.<sup>12</sup> The more recent flatland deposits overlie Franciscan shale, sandstone and conglomerate, which are exposed in the western foothills and form the core bedrock of the Coast Ranges on the San Francisco Peninsula.<sup>13</sup>

### *Faults*

The Bay Area is in one of the most active seismic regions in the United States. Each year, low and moderate magnitude earthquakes occurring in or near the Bay Area are felt by residents of San Carlos. San Carlos is closest to the active San Andreas Fault System, which is located about 1 mile west of the western border of the city.<sup>14</sup>

When earthquake faults within the San Francisco Bay Area's nine-county area were considered, the USGS estimated that the probability of a magnitude (M) 6.7 or greater earthquake prior to year 2044 is 72 percent, or nearly a three-quarters probability. The forecast probability for each individual fault to produce an M 6.7 or greater seismic event by the year 2044 is 32 percent for the Hayward Fault, 33 percent for the San Andreas Fault, and 25 percent for the Calaveras Fault.<sup>15</sup> Earthquakes of this magnitude can create ground accelerations severe enough to cause major damage to structures and foundations not designed to resist earthquakes. Underground utility lines are also susceptible where they lack sufficient flexibility to accommodate the seismic ground motion.<sup>16</sup> According to the Association of Bay Area Governments (ABAG), in the event of an M 7.8 earthquake on the San Andreas Fault, the seismic forecasts suggest that most parts of the EIR Study Area are expected to experience "violent" shaking.<sup>17</sup> The April 1906 earthquake on the San Andreas Fault, estimated between M 7.7 and M 8.3, was the largest seismic event in recent history that affected the EIR Study Area. More recently, the M 6.9 Loma Prieta earthquake of October 1989 on the San Andreas Fault caused significant damage throughout the San Francisco Bay Area, although no deaths were reported in San Mateo County.

The EIR Study Area is not located in an Alquist-Priolo fault zone, and there is no evidence that a fault trace exists beneath the area.<sup>18</sup>

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<sup>12</sup> Brabb, E.E., R.W. Graymer, and D.L. Jones, *Geology of the onshore part of San Mateo County, California: A digital database*, United States Geological Survey Open-File Report 98-137, 1998.

<sup>13</sup> City of San Carlos, 2009, Draft 2030 General Plan EIR.

<sup>14</sup> United States Geological Survey, Montara Mountain (1980), Palo Alto (1973), San Mateo (1980), and Woodside (1973), Quadrangles, California, 7.5 Minute Series (Topographic), scale 1:24,000.

<sup>15</sup> United States Geological Survey, 2015, Uniform California Earthquake Rupture Forecast 3: A New Earthquake Forecast for California's Complex Fault System, Fact Sheet 2015-3009.

<sup>16</sup> Association of Bay Area Governments, 1995, *The San Francisco Bay Area On Shaky Ground*, Publication Number P95001EQK, 13 maps, scale 1:1,000,000.

<sup>17</sup> Association of Bay Area Governments, 2024, MTC/ABAG Hazard Viewer Map, Earthquake Shaking Scenarios, <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>, accessed November 1, 2024.

<sup>18</sup> California Department of Conservation, updated September 23, 2021, Earthquake Zones of Required Investigation, <https://maps.conservation.ca.gov/cgs/EQZApp/app/>, accessed November 7, 2024.

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### *Liquefaction*

Liquefaction typically occurs in areas where moist, fine-grained, cohesionless sediment or fill materials are subjected to strong, seismically induced ground shaking. Under certain circumstances, the ground shaking can temporarily transform an otherwise solid material to a fluid state, which can result in the horizontal movement of soils on gentle slopes, called lateral spreading. Liquefaction is a serious hazard and may result in buildings that subside and suffer major structural damage. Liquefaction is most often triggered by seismic shaking, but it can also be caused by improper grading, landslides, or other factors. In dry soils, seismic shaking may cause soil to consolidate rather than flow, a process known as densification.

Liquefaction potential within the EIR Study Area range from very low to very high, in the western hill areas to the flatlands and bay margins, respectively.<sup>19</sup> Areas of loose, saturated, granular soils with little clay content that are susceptible to liquefaction do exist in San Carlos, particularly in the low-lying area of fill that fronts the Bay.<sup>20</sup> Generally, for the low-lying areas within the mapped 100- or 500-year floodplain, site-specific analyses of liquefaction potential should be completed before any major development.

### *Landslides and Slope Instability*

Landslides are gravity-driven movements of earth materials that can include rock, soil, unconsolidated sediment, or combinations of such materials. The rate of landslide movement can vary considerably; some move rapidly, as in a soil or rock avalanche, and others “creep,” or move slowly for long periods of time. The susceptibility of a given area to landslides depends on many variables, although the general characteristics that influence landslide hazards are widely acknowledged. Some of the more important contributing factors are:

- **Slope Material.** Loose, unconsolidated soils and soft, weak rocks are more hazardous than firm, consolidated soils or hard bedrock.
- **Slope Steepness.** Most landslides occur on moderate to steep slopes.
- **Structure and Physical Properties of Materials.** This includes the orientation of layering and zones of weakness relative to slope direction.
- **Water Content.** Increased water content increases landslide hazard by decreasing friction and adding weight to the materials on a slope.
- **Vegetation Coverage.** Abundant vegetation with deep roots promotes slope stability.
- **Proximity to Areas of Erosion or Man-Made Cuts.** Undercutting slopes can greatly increase landslide potential.
- **Earthquake Ground Motions.** Strong seismic ground motion can trigger landslides in marginally stable slopes or loosen slope materials, which increases the risk of future landslides.

<sup>19</sup> Association of Bay Area Governments, 2024, MTC/ABAG Hazard Viewer Map, Earthquake Liquefaction Susceptibility, <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>, accessed November 8, 2024.

<sup>20</sup> City of San Carlos, 2009, Draft 2030 General Plan EIR.

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Landslides have the potential to occur in the EIR Study Area on some of the upper hilly slopes, more commonly west of Alameda de las Pulgas.<sup>21</sup> Landslides are not of issue in the majority of the EIR Study Area where grades are flat. Because of differences in the physical characteristics of slope materials, which markedly influence landslide potential, some superficially similar areas may differ strongly in terms of landslide hazards. A site-specific geotechnical analysis would be needed to accurately assess potential landslide hazards at any specific project location.

### *Erosion*

Erosion occurs when the upper layers of soil are displaced by erosive agents such as water, ice, snow, air, plants, animals, or anthropogenic forces. Sandy soils on moderate slopes or clayey soils on steep slopes are susceptible to erosion when exposed to these forces. Erosion can become more frequent when established vegetation is disturbed or removed due to grading, wildfires, or other factors. New development often includes the removal and/or decompaction of soils on a site, minor grading, construction of buildings and service roadways and landscaping. Trenching, grading, and compacting associated with construction of structures, modification or relocation of underground utility lines and landscape or hardscape installation could expose areas of soil to erosion by wind or water during construction processes.

### *Land Subsidence*

Land subsidence refers to the lowering of the ground surface due to extraction or lowering of water levels or other stored fluids within the subsurface soil pores, or due to seismic activity that can cause alluvial sediments to compact.

Land subsidence occurred within the low-lying areas of the city, mainly along the Bay margins. The EIR Study Area has minimal area of potential soil subsidence at the eastern end of the EIR Study Area.<sup>22</sup> Underlying soils along the shoreline in the eastern part of the city, are at risk of subsidence due to potential sea level rise which could lead to increased saturation of the location's soils. Areas of potential concern include shoreline roads such as US Highway 101, and infrastructure located beneath these roads.

### *Expansive Soils*

Expansive soils can change dramatically in volume depending on moisture content. When wet, these soils can expand; when dry, they can contract or shrink. Sources of moisture that can trigger this shrink-swell phenomena can include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soil can exhibit wide cracks in the dry season, and changes in soil volume have

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<sup>21</sup> Association of Bay Area Governments, 2024, MTC/ABAG Hazard Viewer Map, Landslide Hazard (Rainfall Induced), <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>, accessed November 8, 2024.

<sup>22</sup> United States Geological Survey, 2024, Areas of Land Subsidence in California. [https://ca.water.usgs.gov/land\\_subsidence/california-subsidence-areas.html](https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html)



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the potential to damage concrete slabs, foundations, and pavement. Special building/structure design or soil treatment are often needed in areas with expansive soils.

Expansive soils are typically very fine grained with a high to very high percentage of clay, typically montmorillonite, smectite, or bentonite clay. Linear extensibility soil tests are often used to identify expansive soils, wherein soil sample volume/length changes in response to reduced moisture content.<sup>23</sup> Expansive soils occur mainly in the east with some low shrink-swell soil in the western parts of the city. Expansive soils are typically identified during project review stages prior to construction and require specific engineering methods to reduce stresses to buildings and infrastructure. A geotechnical investigation generally provides the most reliable means of evaluating and mitigating such soil characteristics.

Expansive soils are present in the EIR Study Area, specifically in the western portion and in the SOI in the Pulgas Ridge Area.<sup>24</sup> However, these areas mapped are classed as “low” and would not pose a significant hazard to any projects proposed in those areas.

### Paleontological Resources

Paleontological resources (fossils) are the remains and/or traces of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, and wood are found in the geologic deposits (rock formations) in which they were originally buried. Paleontological resources represent a limited, non-renewable, sensitive scientific and educational resource. The potential for fossil remains at a location can be predicted through previous correlations established between the fossil occurrence and the geologic formations where they were buried. For this reason, geologic knowledge of a particular area and the paleontological resource sensitivity of particular rock formations make it possible to predict where fossils will or will not be encountered.

#### 4.6.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant geology and soils impact if it would:

- GEO-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.

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<sup>23</sup> Army Corps of Engineers Field Manual TM 5-818-7, 1985,  
[https://armypubs.army.mil/epubs/DR\\_pubs/DR\\_a/pdf/web/tm5\\_818\\_7.pdf](https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/tm5_818_7.pdf), accessed November 1, 2024.

<sup>24</sup> City of San Carlos, 2030 San Carlos General Plan, Figure 8-7.

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- GEO-2 Result in substantial soil erosion or the loss of topsoil.
- GEO-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.
- GEO-4 Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- GEO-5 Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
- GEO-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- GEO-7 In combination with past, present, and reasonably foreseeable projects, result in cumulative geology and soil impacts in the area.

### 4.6.3 IMPACT DISCUSSION

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GEO-1	The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault, strong seismic ground shaking, and seismic-related ground failure including liquefaction and landslides.
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#### Alquist-Priolo Fault Zones

Proposed development within the planning area would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. The EIR Study Area is not located in an Alquist-Priolo fault zone, and there is no evidence that a fault trace exists beneath.

The EIR Study Area is located approximately 1 mile from the San Andreas fault; the closest known active fault. Therefore fault-line surface rupture is not considered a direct hazard. Additionally, there is no evidence of any other fault traces within the EIR Study Area.

Nevertheless, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to geology and soils, including fault rupture. The following General Plan goal and policy would serve to minimize potential adverse impacts related to earthquake fault rupture:

- **Goal ESPS-1:** Reduce the potential loss of life, injury, and property damage due to seismic and geologic hazards.

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- **Policy ESPS-1.4:** Enforce requirements of the Alquist- Priolo Special Studies Zones Act should any fault traces in San Carlos be discovered and prove to be active or potentially active.

### Seismic Ground Shaking

The intensity of ground shaking at a given location depends on several factors, primarily on the earthquake magnitude, the distance from the epicenter, and the characteristics of the soils or bedrock units underlying the site. The San Gregorio, Hayward, and San Andreas Faults, which are closest to the EIR Study Area, are potentially capable of producing the most intense ground accelerations in the EIR Study Area due to their proximity. Secondary effects of earthquakes are nontectonic processes such as liquefaction, lateral spreading, seismically induced landslides, and ground lurching, which can lead to ground deformation. Ground deformation, including fissures, settlement, displacement, and loss of bearing strength, are the leading causes of damage to structures during a moderate to large earthquake.

Development within the EIR Study Area may expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, from strong seismic ground shaking. Conformance with the CBC would reduce impacts to new development associated with strong seismically induced ground shaking to the maximum extent practicable, under currently accepted engineering practices. The CBC sets forth structural design parameters for buildings to withstand seismic shaking without substantial structural damage. Section 1803 of the CBC requires preparation of a site-specific geotechnical investigation to assess the degree of potential seismic hazards and recommend appropriate design/mitigation measures. The 2022 CBC contains standards and regulations relating to seismic safety and construction standards for building foundations. Conformance with the CBC, as required by State law, would minimize the potential for damage of new structures and their foundations.

Areas east of Alameda de las Pulgas could respond poorly to strong seismic shaking due to the area being mostly underlain by artificial fill and Bay mud. Because the EIR Study Area is near the San Andreas fault zone, special seismic design would be required, pursuant the CBC. If the City's building inspector indicated additional investigations are necessary to assess soil, the City has the option to impose those recommendations as conditions of project approval. Project designs are required to include the application of CBC Seismic Zone 4 standards, including the required Near-Source Factors for Seismic Source Type A, as the minimum seismic-resistant design. Some seismic design variation exists in the Code, depending on whether they are considered to be sensitive uses.

The Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to geology and soils, including seismic ground shaking. The following General Plan goal, policies, and actions would serve to minimize potential adverse impacts from ground failure:

- **Goal ESPS-1:** Reduce the potential loss of life, injury, and property damage due to seismic and geologic hazards.
  - **Policy ESPS-1.1:** The City Building Official shall verify geotechnical and soils reports for development in areas where potentially serious geologic risks exist. These reports shall address the degree of hazard, design parameters for the project based on the hazard, and appropriate

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mitigation measures. Based on the findings of these reports, the City shall require that new structures are designed and built to withstand the effects of seismically-induced ground failure.

- **Policy ESPS-1.2:** Prohibit structural development in known areas where seismic and geological hazards cannot be mitigated.
- **Policy ESPS-1.3:** Continue to monitor and enforce mitigation measures to reduce risk for projects where geological and seismic hazards can be mitigated.
- **Policy ESPS-1.5:** Continue to incorporate seismic risk analysis into the City's ongoing building inspection program through thorough review of projects by plan check and field inspections.
- **Policy ESPS-1.6:** Continue to encourage retrofitting of structures, particularly older buildings, to withstand earthquake shaking and landslides, consistent with state Building Codes and Historic Building Codes.
- **Policy ESPS-1.7:** Continue to incorporate geotechnical hazard data into future land use decision-making, site design, and construction standards.
- **Policy ESPS-1.8:** Actively promote public education, research, and information dissemination on seismic and geotechnical hazards.
- **Policy ESPS-1.9:** Continue to ensure that seismic hazards are mitigated to the greatest extent possible for critical public facilities, infrastructure, and emergency services.
- **Action ESPS-1.1:** Continue to review the General Plan, Zoning Ordinance, Subdivision Ordinance, and Uniform Building Code to ensure that geotechnical data and information relating to seismic hazards is current and accurate.
- **Action ESPS-1.2:** Continue to enforce the City of San Carlos Unreinforced Masonry Seismic Retrofit Program ordinance for any existing unreinforced masonry structures that may exist within the city.
- **Action ESPS-1.3:** Provide opportunity for voluntary retrofit of existing residential buildings by implementing the Standard Plan Set for Residential Seismic Retrofitting as adopted by ABAG.

## Liquefaction

Liquefaction potential in the EIR Study Area ranges from very low to very high. Specific locations with very high liquefaction potential occur in the flatlands and bay margins of the city, generally to the northeast, with high liquefaction potential occurring along Devonshire Boulevard and San Carlos Avenue. As previously discussed, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to geology and soils, including liquefaction. The General Plan goals, policies, and actions identified above would also serve to minimize potential adverse impacts related to ground failure.

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### Landslides

Landslides are downward and outward movements of slope forming materials such as rock, soil and/or artificial fill. The general characteristics that influence landslide hazards include slope material, slope steepness, water content, vegetation coverage and proximity to areas of erosion or man-made cuts. Landslides occur on some of the upper hilly slopes, more commonly in the western area of the city. Landslide Hazard areas are consistently moderate to high in the western half of the EIR Study Area. Stringent City grading and building codes and slope landscaping requirements are in place to address landslide potential. Soils studies and remediation for any problem are required prior to issuance of a permit. Additionally, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to geology and soils, including landslides. The General Plan goals, policies, and actions identified above would also serve to minimize potential adverse impacts related to landslides.

### Summary

In northern California, there is no method to completely avoid earthquake hazards. However, appropriate measures to minimize the effects of earthquakes are included in the CBC, with specific provisions for seismic design. The design of structures in accordance with the CBC would minimize the effects of ground shaking to the greatest degree feasible, except for during a catastrophic seismic event. Additionally, future development would be required to comply with SCMC requirements for geotechnical reports on a project-by-project basis. Because future development within the buildout horizon of the proposed project would be required to comply with the CBC and the SCMC, as well as General Plan goals, policies, and actions, implementation of the proposed project would not cause or worsen seismic ground shaking; therefore, the impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>GEO-2</b>	<b>The proposed project would not result in substantial soil erosion or the loss of topsoil.</b>
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Substantial soil erosion or the loss of topsoil during construction of future development could undermine structures or minor slopes, which would be a concern during implementation of the proposed project. New development often includes the removal and/or decompaction of soils on a site, minor grading, construction of buildings and service roadways and landscaping. Trenching, grading, and compacting associated with construction of structures, modification or relocation of underground utility lines and landscape or hardscape installation could expose areas of soil to erosion by wind or water during construction processes. Disturbed soils are more prone to erosion when left exposed during winter, early spring and summer storm events (periods of high precipitation, runoff, and winds).

Erosion control plans, specific to projects in the EIR Study Area, would be prepared as necessary to determine soil conditions and to identify management practices to reduce soil erosion. Erosion control plans would include activities such as the following:

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- Confine all vehicular traffic associated with construction to designated rights-of-way, material yards, and access roads.
- Limit disturbance of soils and vegetation removal to the minimum area necessary for access and construction.
- Where vegetation removal is necessary, use cutting/mowing methods instead of blading, wherever possible.
- Slope and berm graded material, where possible, to reduce surface water flows across the graded area.
- Use detention basins, certified weed-free straw bales, or silt fences, where appropriate.
- Use drainage control structures, where necessary, to direct surface drainage away from disturbance areas and to minimize runoff and sediment deposition downslope from all disturbed areas. These structures could include culverts, ditches, water bars (berms and cross ditches), and sediment traps.

Additionally, the use of a Storm Water Pollution Prevention Plan (SWPPP), which specifies best management practices for temporary erosion control for sites disturbing one or more acres, would reduce the potential for erosion during construction activities. Standard erosion control measures would be implemented as part of a SWPPP for proposed projects 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.

Furthermore, because future development is anticipated to occur as infill or redevelopment in urban areas, development is not likely to result in substantial soil erosion or loss of topsoil. Adherence to existing regulatory requirements that include, but are not limited to, the CBC and the SCMC, would ensure that impacts associated with substantial erosion and loss of topsoil from future development would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>GEO-3</b>	<b>The proposed project would not 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.</b>
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Unstable geologic units are known to be present within the EIR Study Area. As previously discussed, landslides have historically occurred and could continue to occur in areas with steeper slopes and less stable soil types. These include areas with steep slopes on the western half of the EIR Study Area and hilly areas of the EIR Study Area. Additionally, liquefaction potential is mapped where the eastern half of the EIR Study Area has ranging medium to very high liquefaction potential. No known fault traces are located within the EIR Study Area and would not result in lateral spreading as a result of fault rupture.

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The EIR Study Area has minimal area of potential soil subsidence at the eastern end of the EIR Study Area.

Due to the built-out nature of the EIR Study Area, future development would occur in previously developed areas. These development projects would be required to comply with the CBC, which provides regulations for building design and construction to ensure geologic and soil stability. In addition to protections afforded by State laws, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to geology and soils, including geologic stability. The General Plan goal, policies, and actions identified impact discussion GEO-1 would also serve to minimize potential adverse impacts related to development on unstable soils or geologic units.

Future development within the buildout horizon of the proposed project would be required to comply with State and local regulations, including the SCMC and General Plan goal, policies, and actions that minimize impacts related to unstable geologic units and soils where landslide, lateral spreading, subsidence, liquefaction, or collapse could occur in the EIR Study Area. General Plan goal, policies, and actions would also require ongoing review, identification, and maintenance of maps and regulations related to geologic and seismic hazards. Therefore, implementation of proposed project would not result in development on a geologic unit or on soils that are unstable and could result in landslides, lateral spreading, subsidence, liquefaction, or collapse, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>GEO-4</b>	<b>The proposed project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.</b>
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Expansive soils are present in the EIR Study Area, specifically in the western portion and in the SOI in the Pulgas Ridge Area. However, these areas mapped are classed as “low” and would not pose a significant hazard to any projects proposed in those areas.

The Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to geology and soils, including geologic stability. The General Plan goal, policies, and actions identified impact discussion GEO-1 would also serve to minimize potential adverse impacts related to development on expansive soil.

Future development within the buildout horizon the proposed project would be required to comply with existing regulations adopted to minimize development on expansive soils in the EIR Study Area. Future development within the buildout horizon of the proposed project would also comply with the General Plan goal, policies, and actions that require ongoing review, identification, and maintenance of maps and regulations related to geologic and seismic hazards. Therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>GEO-5</b>	<b>The proposed project would not require the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.</b>
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As discussed in Section 4.6.1.1, *Regulatory Framework*, SCMC Chapter 13.04 requires all new construction to connect to the City of San Carlos sanitary sewer system. Wastewater from new lots or parcels would be discharged into the existing public sanitary sewer system serviced by the City. SCMC Chapter 17.36 also requires sanitary sewer facilities connecting with the existing City sewer system be installed to serve each lot and to grades, location, design, and sizes approved by the City Engineer. Development on parcels currently in the SOI would not occur under the proposed project unless and until such parcels are annexed to the City of San Carlos. Therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>GEO-6</b>	<b>The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.</b>
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The geology and soils in the EIR Study Area are common throughout the city and region and are not considered to be unique. However, geological formations underlying the EIR Study Area have the potential to contain unique paleontological resources.

Future development would be required to comply with the federal PRPA which limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency, and PRC Section 5097, which prohibits the removal of any paleontological site or feature from public lands without the permission of the jurisdictional agency.

Ground-disturbing construction activities (e.g., grading and excavation) associated with future development in the EIR Study Area could uncover fossilized remains of organisms from prehistoric environments that have not been recorded. Adherence to the Society of Vertebrate Paleontology's standards and protocols would ensure the protection of unique paleontological resources during construction of future development.<sup>25</sup> Such protocols include, but are not limited to:

- Excavations within a 50-foot radius of the find shall be temporarily halted or diverted.
- Ground-disturbance work shall cease until a City-approved, qualified paleontologist determines whether the resource requires further study.
- The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995) as appropriate, evaluate the

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<sup>25</sup> Society of Vertebrate Paleontology, 2010, *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*, [https://vertpaleo.org/wp-content/uploads/2021/01/SVP\\_Impact\\_Mitigation\\_Guidelines.pdf](https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf), accessed November 5, 2024.



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potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5.

- The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find.
- If is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The excavation plan shall be submitted to the City of San Carlos for review and approval prior to implementation.
- All construction activities shall adhere to the recommendations in the excavation plan.

Compliance with the PRPA and PRC Section 5097 would ensure that impacts to paleontological resources from future development within the buildout horizon of the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>GEO-7</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative geology and soil impacts in the area.</b>
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The cumulative setting for this analysis includes growth within the EIR Study Area in combination with projected growth in the rest of San Mateo County and the surrounding region. Anticipated development in the EIR Study Area would be subject to regulations pertaining to seismic safety, including the CBC and SCMC. Compliance with these requirements would, to the maximum extent practicable, reduce cumulative, development-related impacts that pertain to seismic shaking, seismic-related ground failure, seismically induced landslides, soil erosion, and unstable soils. Similarly, compliance with relevant CBC and SCMC requirements would minimize the cumulative impacts associated with substantial erosion or loss of topsoil. While none of the soils in the EIR Study Area are considered to have unique geological resources, unique paleontological resources may occur. Site specific evaluation in the event that previously unknown resources are discovered during construction activities for new development or redevelopment would be required. Future development would be focused on specific sites or areas, which would be evaluated for site development constraints on a case-by-case basis and required to adhere to existing regulations as well as General Plan goals, policies, and actions. Therefore, the proposed project would not result in a cumulatively considerable impact to geology and soils and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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## GREENHOUSE GAS EMISSIONS

### 4.7 GREENHOUSE GAS EMISSIONS

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to greenhouse (GHG) gas emissions, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.7.1 ENVIRONMENTAL SETTING

##### 4.7.1.1 TERMINOLOGY

The following are definitions for terms used throughout this chapter:

- **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 GHG absorbs relative to a molecule of carbon dioxide (CO<sub>2</sub>) over a given period of time (20, 100, and 500 years). CO<sub>2</sub> has a GWP of 1.
- **Carbon dioxide-equivalent (CO<sub>2</sub>e).** The standard unit to measure the amount of GHGs in terms of the amount of CO<sub>2</sub> that would cause the same amount of warming. CO<sub>2</sub>e is based on the GWP ratios between the various GHGs relative to CO<sub>2</sub>.
- **MTCO<sub>2</sub>e.** Metric ton of CO<sub>2</sub>e.
- **MMTCO<sub>2</sub>e.** Million metric tons of CO<sub>2</sub>e.

##### 4.7.1.2 GREENHOUSE GASES AND CLIMATE CHANGE

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<sub>2</sub>), methane (CH<sub>4</sub>), and ozone (O<sub>3</sub>)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.<sup>1,2</sup>

<sup>1</sup> Water vapor (H<sub>2</sub>O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

<sup>2</sup> 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. The share of black carbon emissions from transportation is dropping rapidly and is expected to continue to do so between now and 2030 as

## GREENHOUSE GAS EMISSIONS

The major GHGs are briefly described below.

- **Carbon dioxide (CO<sub>2</sub>)** 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 (i.e., sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH<sub>4</sub>)** 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 landfills and water treatment facilities.
- **Nitrous oxide (N<sub>2</sub>O)** 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 applicable GHG emissions are shown in Table 4.7-1, *Greenhouse Gas Emissions and Their Relative Global Warming Potential Compared to CO<sub>2</sub>*. The GWP is used to convert GHGs to CO<sub>2</sub>-equivalence (CO<sub>2</sub>e) 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 Fifth Assessment Report (AR5) GWP values for methane (CH<sub>4</sub>), a project that generates 10 metric tons (MT) of CH<sub>4</sub> would be equivalent to 280 MT of CO<sub>2</sub>.

**TABLE 4.7-1 GHG EMISSIONS AND THEIR RELATIVE GLOBAL WARMING POTENTIAL COMPARED TO CO<sub>2</sub>**

GHGs	Fourth Assessment Report Global Warming Potential relative to CO <sub>2</sub> a	Fifth Assessment Report Global Warming Potential Relative to CO <sub>2</sub> a	Six Assessment Report Global Warming Potential Relative to CO <sub>2</sub> a
Carbon Dioxide (CO <sub>2</sub> )	1	1	1
Methane (CH <sub>4</sub> ) <sup>b</sup>	25	28	30
Nitrous Oxide (N <sub>2</sub> O)	298	265	273

Notes: GWP = global warming potential. The Intergovernmental Panel on Climate Change published updated GWP values in its Sixth Assessment Report (AR6) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO<sub>2</sub>. However, GWP values identified in its Fifth Assessment Report (AR5) are used by the 2022 Scoping Plan for long-term emissions forecasting. Therefore, this analysis utilizes AR5 GWP values consistent with the current Scoping Plan.

a. Based on 100-year time horizon of the GWP of the air pollutant compared to CO<sub>2</sub>.

b. 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<sub>2</sub> is not included.

Sources: Intergovernmental Panel on Climate Change, 2007, *Fourth Assessment Report: Climate Change 2007*, New York: Cambridge University Press; Intergovernmental Panel on Climate Change, 2013, *Fifth Assessment Report: Climate Change 2013*, New York: Cambridge University Press; Intergovernmental Panel on Climate Change, February 2022, Summary for Policymakers, *Sixth Assessment Report: Climate Change 2022: Impacts, Adaptation and Vulnerability*, [https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC\\_AR6\\_WGII\\_SummaryForPolicymakers.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf)

a result of California's air quality programs. The remaining black carbon emissions will come largely from woodstoves/fireplaces, off-road applications, and industrial/commercial combustion. However, state and national GHG inventories do not include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

## GREENHOUSE GAS EMISSIONS

### 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, 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.

The recent IPCC AR6 summarizes the latest scientific consensus on climate change. It finds that atmospheric concentrations of CO<sub>2</sub> have increased by 50 percent since the Industrial Revolution and continue to increase at a rate of two parts per million each year. By the 2030s, and no later than 2040, the world will exceed 1.5 degrees Celsius (°C) warming.<sup>3</sup> 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.<sup>4</sup> In the past, gradual changes in the Earth's temperature changed the distribution of species, availability of water, and other conditions. 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.<sup>5</sup>

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 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:

- Fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in the frequency of warm spells and 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).

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<sup>3</sup> California Air Resources Board, 2022, *2022 Scoping Plan for Achieving Carbon Neutrality*, <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>, accessed September 24, 2024.

<sup>4</sup> California Climate Action Team, 2006, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, [https://planning.lacity.gov/eir/8150Sunset/References/4.E.%20Greenhouse%20Gas%20Emissions/GHG.23\\_CalEPA%202006%20Report%20to%20Governor.pdf](https://planning.lacity.gov/eir/8150Sunset/References/4.E.%20Greenhouse%20Gas%20Emissions/GHG.23_CalEPA%202006%20Report%20to%20Governor.pdf), accessed September 24, 2024.

<sup>5</sup> Intergovernmental Panel on Climate Change, 2007, *Fourth Assessment Report: Climate Change 2007*, New York: Cambridge University Press, <https://www.ipcc.ch/report/ar4/syr/>, accessed September 24, 2024.

## GREENHOUSE GAS EMISSIONS

### Potential Climate Change Impacts for California

There is at least a greater than 50 percent likelihood that global warming will reach or exceed 1.5°C in the near-term, even for the very low GHG emissions scenario.<sup>6</sup> Climate change is already impacting California and will continue to affect it for the foreseeable future. For example, the average temperature in most areas of California is already 1 degree Fahrenheit (°F) higher than historical levels, and some areas have seen average increases in excess of 2°F.<sup>7</sup> The California Fourth Climate Change Assessment identifies the following climate change impacts under a business-as-usual scenario, in which no new actions are taken to curb GHG emissions:

- Annual average daily high temperatures in California are expected to rise by 2.7°F by 2040, 5.8°F by 2070, and 8.8°F by 2100 compared to observed and modeled historical conditions. These changes are statewide averages. Heat waves are projected to become longer, more intense, and more frequent.
- Warming temperatures are expected to increase soil moisture loss and lead to drier seasonal conditions. Summer dryness may become prolonged, with soil drying beginning earlier in the spring and lasting longer into the fall and winter rainy season.
- High heat increases the risk of death from cardiovascular, respiratory, cerebrovascular, and other diseases.
- Droughts are likely to become more frequent and persistent.
- Climate change is projected to increase the strength of the most intense precipitation and storm events affecting California.
- Mountain ranges in California are already seeing a reduction in the percentage of precipitation falling as snow. Snowpack levels are projected to decline significantly by 2100 due to reduced snowfall and faster snowmelt. California's water storage system is designed with the expectation that snow will stay frozen for many months, and that as it melts, it will be stored in a series of reservoirs and dams, many of which are used to generate electricity. Changing waterfall patterns therefore impact both water supply and electricity supply.
- Marine layer clouds are projected to decrease, though more research is needed to better understand their sensitivity to climate change.
- Extreme wildfires (i.e., fires larger than 10,000 hectares or 24,710 acres) are expected to occur 50 percent more frequently. The maximum area burned statewide may increase 178 percent by the end of the century. Drought and reduced water supplies can increase wildfire risk.
- Exposure to wildfire smoke is linked to increased incidence of respiratory illness.

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<sup>6</sup> Intergovernmental Panel on Climate Change, 2022, Summary for Policymakers, *Sixth Assessment Report: Climate Change 2022: Impacts, Adaptation and Vulnerability*, [https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC\\_AR6\\_WGII\\_SummaryForPolicymakers.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf), accessed September 24, 2024.

<sup>7</sup> California Office of Emergency Services, 2020, *California Adaptation Planning Guide*, <https://www.caloes.ca.gov/HazardMitigationSite/Documents/CA-Adaptation-Planning-Guide-FINAL-June-2020-Accessible.pdf>, accessed September 24, 2024.

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- Sea-level rise is expected to continue to increase erosion of beaches, cliffs, and bluffs.<sup>8</sup>

Global climate change risks to California are shown in Table 4.7-2, *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 4.7-2 SUMMARY OF GHG EMISSIONS RISKS TO CALIFORNIA**

Impact Category	Potential Risk
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Fewer extremely cold nights Poor air quality made worse Higher temperatures increase ground-level ozone levels Deaths due to extreme heat
Water Resources Impacts	Decreasing Sierra Nevada snowpack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea-level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pests and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand

Sources: California Energy Commission, 2006, *Our Changing Climate: Assessing the Risks to California*, 2006 Biennial Report, CEC-500-2006-077, California Climate Change Center; California Energy Commission, 2009, *The Future Is Now: An Update on Climate Change Science, Impacts, and Response Options for California*, CEC-500-2008-0077; California Climate Change Center, 2012, *Our Changing Climate 2012: Vulnerability and Adaptation to the Increasing Risks from Climate Change in California*; California Natural Resources Agency, 2016, *Safeguarding California: Implementation Action Plans*; California Office of Emergency Services, June 2020, *California Adaptation Planning Guide*.

<sup>8</sup> California Office of Emergency Services, 2020, *California Adaptation Planning Guide*, <https://www.caloes.ca.gov/HazardMitigationSite/Documents/CA-Adaptation-Planning-Guide-FINAL-June-2020-Accessible.pdf>, accessed September 24, 2024.

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### 4.7.1.3 REGULATORY FRAMEWORK

#### Federal Regulations

The United States Environmental Protection Agency (USEPA) 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 do not impose any emission reduction requirements but allow 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.<sup>9</sup>

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identified emissions of six key GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbons, and SF<sub>6</sub>—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 project's GHG emissions inventory because they constitute the majority of GHG emissions and, according to guidance by the Bay Area Air Quality Management District (BAAQMD), are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

#### *Endangerment Finding*

The United States Environmental Protection Agency (USEPA) 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 USEPA's final findings respond to the 2007 United States Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not impose any emission reduction requirements but allowed the USEPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.<sup>10</sup>

To regulate GHGs from passenger vehicles, the USEPA was required to issue an endangerment finding.<sup>11</sup> The finding identified emissions of six key GHGs—carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrogen oxide (N<sub>2</sub>O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF<sub>6</sub>)—that have been the subject

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<sup>9</sup> United States Environmental Protection Agency, 2009, EPA: Greenhouse Gases Threaten Public Health and the Environment. Science overwhelmingly shows greenhouse gas concentrations at unprecedented levels due to human activity. [https://archive.epa.gov/epapages/newsroom\\_archive/newsreleases/08d11a451131bca585257685005bf252.html](https://archive.epa.gov/epapages/newsroom_archive/newsreleases/08d11a451131bca585257685005bf252.html), accessed September 24, 2024.

<sup>10</sup> United States Environmental Protection Agency, 2009, EPA: Greenhouse Gases Threaten Public Health and the Environment: Science Overwhelmingly Shows Greenhouse Gas Concentrations at Unprecedented Levels due to Human Activity, [https://archive.epa.gov/epapages/newsroom\\_archive/newsreleases/08d11a451131bca585257685005bf252.html](https://archive.epa.gov/epapages/newsroom_archive/newsreleases/08d11a451131bca585257685005bf252.html), accessed September 24, 2024.

<sup>11</sup> United States Environmental Protection Agency, 2009, USEPA: Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, <https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a>, accessed September 24, 2024.



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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, according to guidance by BAAQMD, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

### *Mandatory Reporting Rule for GHGs (2009)*

In response to the endangerment finding, the USEPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (e.g., large stationary sources) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO<sub>2</sub>e per year are required to submit an annual report.

### *CAFE Standards (2017 to 2026)*

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for vehicle model years 2017 to 2025, requiring a fleet average of 54.5 miles per gallon (mpg) in 2025. However, on March 30, 2020, the USEPA finalized updated CAFE and GHG emissions standards for passenger cars and light trucks, covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 mpg for model year 2026 vehicles.<sup>12</sup>

On December 21, 2021, under the direction of Executive Order (EO) 13990 issued by President Biden, the National Highway Traffic Safety Administration (NHTSA) repealed SAFE Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. In addition, the NHTSA announced new proposed fuel standards on March 31, 2022. Fuel efficiency under the new standards proposed will increase 8 percent annually for model years 2024 to 2025 and 10 percent for model year 2026. Overall, the new CAFE standards require a fleet average of 49 mpg for passenger vehicles and light trucks for model year 2026, which would be a 10-mpg increase relative to model year 2021.<sup>13</sup>

On June 7, 2024, NHTSA announced final CAFE standards for passenger cars and light trucks built in model years 2027-2031 and final fuel efficiency standards for heavy-duty pickup trucks and vans built in model years 2030-2035. The final rules establish standards that would require an industry fleet-wide average of approximately 50.4 mpg for passenger cars and light trucks in model year 2031, by increasing fuel economy by 2 percent year over year for passenger cars (model years 2027-2031) and for light trucks (model years 2029-2031). For heavy-duty pickup trucks and vans, the final rule would increase fuel efficiency at a rate of 10 percent per year (model years 2030-2032) and 8 percent per year (model years 2033-2035).<sup>14</sup>

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<sup>12</sup> 85 Federal Register 24174 (April 30, 2020).

<sup>13</sup> National Highway Traffic Safety Administration, 2022, USDOT Announces New Vehicle Fuel Economy Standards for Model year 2024-2026, <https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026>, accessed September 24, 2024.

<sup>14</sup> NHTSA, 2024, Corporate Average Fuel Economy, NHTSA Announces Final Rule for CAFE and HDPUV Standards. <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>, accessed September 18, 2024.

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### State Regulations

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05, EO B-30-15, EO B-55-18, Assembly Bill (AB) 32, AB 1279, Senate Bill (SB) 32, and SB 375.

#### *Executive Order S-03-05*

EO S-03-05 was signed June 1, 2005, and 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)*

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 EO S-03-05. The California Air Resources Board (CARB) prepared the 2008 Scoping Plan to outline a plan to achieve the GHG emissions reduction targets of AB 32.

#### *Senate Bill 375*

SB 375, the Sustainable Communities and Climate Protection Act, was adopted in 2008 to connect the GHG emissions reduction 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 (i.e., excluding 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 (MPO). The Metropolitan Transportation Commission (MTC) is the MPO for the Bay Area region, which includes Napa, Marin, San Francisco, and San Mateo counties. 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 SB 375 Targets*

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology, and then released another update in February 2018, which became effective in October 2018. CARB adopted the updated targets and methodology on March 22, 2018. All Sustainable Communities Strategies (SCS) adopted after October 1, 2018, are subject to these new targets. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan, while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. The updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks compared 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 updated targets call for greater per-capita GHG emission reductions from SB 375 than were currently in place, which for 2035

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translates into updated targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs. CARB's updated targets result in an additional reduction of over 8 MMTCO<sub>2</sub>e in 2035 compared to the prior targets.<sup>15</sup>

### *Executive Order B-30-15*

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions in the state to 40 percent of 1990 levels by year 2030. EO B-30-15 also directed 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 EO S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaptation strategy, Safeguarding California, 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 SB 32 and AB 197 into law, making the EO goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

### *Executive Order B-55-18*

EO 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." EO 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 State 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<sub>2</sub>e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

### *Assembly Bill 1279 and 2022 Climate Change Scoping Plan*

AB 1279, signed by Governor Newsom in September 2022, codifies the carbon neutrality targets of EO B-55-18 for year 2045 and sets a new legislative target for year 2045 of 85 percent below 1990 levels for anthropogenic GHG emissions. CARB was required to update the Scoping Plan to identify and recommend measures to achieve the net-zero and GHG emissions-reduction goals.

CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the state's

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<sup>15</sup> California Air Resources Board, 2018, *Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets*, [https://ww2.arb.ca.gov/sites/default/files/2020-06/SB375\\_Updated\\_Final\\_Target\\_Staff\\_Report\\_2018.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-06/SB375_Updated_Final_Target_Staff_Report_2018.pdf), accessed September 24, 2024.

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anthropogenic GHG emissions.<sup>16</sup> The Scoping Plan was updated to address the carbon neutrality goals of EO B-55-18 and the ambitious GHG reduction target as directed by AB 1279. Previous scoping plans focused on specific GHG reduction targets for industrial, energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. This Plan expands upon earlier scoping plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Carbon neutrality takes it one step further by expanding actions to capture and store carbon, including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time.

The path forward was informed by the recent Intergovernmental Panel on Climate Change’s (IPCC) Sixth Assessment Report (AR6); the measures would achieve 85 percent below 1990 levels by 2045 in accordance AB 1279. CARB’s 2022 Scoping Plan identifies strategies, as shown in Table 4.7-3, *Priority Strategies for Local Government Climate Action Plans*, that would be most impactful at the local level for ensuring substantial process towards the State’s carbon neutrality goals.

**TABLE 4.7-3      PRIORITY STRATEGIES FOR LOCAL GOVERNMENT CLIMATE ACTION PLANS**

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV) and provide electric vehicle (EV) charging at public sites.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed State building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).
VMT Reduction	Reduce or eliminate minimum parking standards.
	Implement complete streets policies and investments, consistent with general plan circulation element requirements.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, and other approaches.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking.
	Implement parking pricing or TDM pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing allowable density of the neighborhood).
	Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert “greenfield” land to urban uses (e.g., green belts, strategic conservation easements).
Building Decarbonization	Adopt all-electric new construction reach codes for residential and commercial uses.
	Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers).
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances.
	Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing).

<sup>16</sup> California Air Resources Board, December 2022, *2022 Scoping Plan for Achieving Carbon Neutrality*, <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>, accessed September 24, 2024.

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**TABLE 4.7-3 PRIORITY STRATEGIES FOR LOCAL GOVERNMENT CLIMATE ACTION PLANS**

Priority Area	Priority Strategies
	Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).

Source: California Air Resources Board, December 2022, *2022 Scoping Plan for Achieving Carbon Neutrality*, <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>.

Residential and mixed-use development projects that include the following key project attributes would accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals. This is the first approach the State recommends for qualitatively determining whether a proposed residential or mixed-use residential development would align with the State’s climate goals while simultaneously advancing fair housing.

Key residential and mixed-use project attributes that reduce GHGs:

- Transportation Electrification
  - Provide EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.
- VMT Reduction
  - Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, and sewer).
  - Does not result in the loss or conversion of the state’s natural and working lands.
  - Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region’s SCS.
  - Reduces parking requirements by:
    - Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or
    - Providing residential parking supply at a ratio of <1 parking space per dwelling unit; or
    - For multi-family residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.
  - At least 20 percent of the units are affordable to lower-income residents.
  - Result in no net loss of existing affordable units.
- Building Decarbonization
  - Use all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking.

The second approach to project-level alignment with State climate goals is net zero GHG emissions, especially for new residential development. The third approach to demonstrating project-level alignment

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with State climate goals is to align with GHG thresholds of significance, which many local air quality management and air pollution control districts have developed or adopted.<sup>17</sup>

### *Transportation Sector Specific Regulations*

#### Advanced Clean Fleets and Advanced Clean Trucks

CARB adopted the Advanced Clean Fleets (ACF) regulation in 2023 to accelerate the transition to zero-emission medium- and heavy-duty vehicles. In conjunction with the Advanced Clean Trucks (ACT) regulation, the ACF regulations help to ensure that medium- and heavy-duty zero-emission vehicles (ZEV) are brought to the market, by requiring certain fleets to purchase ZEVs. The ACF ZEV phase-in approach provides initial focus where the best fleet electrification opportunities exist, sets clear targets for regulated fleets to make a full conversion to ZEVs, and creates a catalyst to accelerate development of a heavy-duty public charging infrastructure network.

#### 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 was 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 USEPA. In 2012, the USEPA issued a Final Rulemaking that set even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles. 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 GHGs with requirements for greater numbers of ZEVs into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.<sup>18</sup>

#### Executive Order S-01-07

On January 18, 2007, the State set a new low carbon fuel standard (LCFS) for transportation fuels sold in the state. EO S-01-07 set a declining standard for GHG emissions measured in CO<sub>2</sub>e gram per unit of fuel energy sold in California. The LCFS required 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 applied to refiners, blenders, producers, and importers of transportation fuels, and used market-based mechanisms to allow these providers to choose the most economically feasible methods for reducing emissions during the "fuel cycle."

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<sup>17</sup> California Air Resources Board, 2022, *2022 Scoping Plan for Achieving Carbon Neutrality*, <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>, accessed September 24, 2024.

<sup>18</sup> California Air Resources Board, 2017, *California's Advanced Clean Cars Midterm Review*, [https://ww2.arb.ca.gov/sites/default/files/2020-01/ACC%20MTR%20Summary\\_Ac.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-01/ACC%20MTR%20Summary_Ac.pdf), accessed September 18, 2024.

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### Executive Order B-16-2012

On March 23, 2012, the State directed CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZEVs in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle [EV] charging stations). EO B-16-2012 also directed the number of ZEVs 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 have zero emissions (ZE) by 2015 and at least 25 percent by 2020. The EO also established a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.

### Executive Order N-79-20

On September 23, 2020, Governor Newsom signed EO N-79-20, establishing a goal that 100 percent of in-state sales of new passenger cars and trucks will be ZE by 2035. Additionally, the fleet goals for trucks are that 100 percent of drayage trucks are ZE by 2035, and 100 percent of medium- and heavy-duty vehicles in the state are ZE by 2045, where feasible. The EO's goal for the State is to transition to 100 percent ZE off-road vehicles and equipment by 2035, where feasible.

### *Renewables Portfolio: Carbon Neutrality Regulations*

### Senate Bills 1078, 107, and X1-2 and Executive Order S-14-08

A major component of California's Renewable Energy Program is the RPS established under SBs 1078 (Sher) and 107 (Simitan). 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. EO S-14-08, signed in November 2008, 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). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production decreases indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

### Senate Bill 350

SB 350 (de Leon) was signed into law in September 2015 and establishes tiered increases to the RPS—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. Under SB 100, the RPS for public-owned facilities and retail sellers consists of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall State policy that eligible renewable energy resources and zero-carbon

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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.

### Senate Bill 1020

SB 1020 was signed into law on September 16, 2022. SB 1020 provides interim RPS targets (90 percent renewable energy by 2035 and 95 percent renewable energy by 2040) and requires renewable energy and zero-carbon resources to reach 100 percent clean electricity by 2045.

### *Energy Efficiency Regulations*

#### California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (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 the consideration and possible incorporation of new energy efficiency technologies and methods.

CEC adopted the 2022 Building Energy Efficiency Standards on August 11, 2021, and they went into effect on January 1, 2023. The 2022 standards encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, and strengthen ventilation standards, among other approaches. The 2022 standards require mixed-fuel single-family homes to be electric ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers. The 2025 Building Energy Efficiency Standards were adopted in September 2024 and will become effective on January 1, 2026. The Building Energy and Efficiency Standards and CALGreen undergo a triennial update with a goal to achieve zero net energy for residential buildings by 2020 and nonresidential buildings by 2030.

#### 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.<sup>19</sup> The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen standards became effective on January 1, 2023.

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<sup>19</sup> The green building standards became mandatory in the 2010 edition of the Code.



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### 2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR Sections 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*

#### Assembly Bill 939: Integrated Waste Management Act of 1989

California’s Integrated Waste Management Act of 1989 (AB 939, Public Resources Code Section 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 multi-family residential land uses. Section 5.408 of 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.

#### Assembly Bill 1327

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code Section 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.

#### Assembly Bill 1826

In October 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 multi-family residential dwellings with 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 with food waste.

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### *Water Efficiency Regulations*

#### Senate Bill X7-7

The 20x2020 Water Conservation Plan was issued by the California Department of Water Resources (DWR) in 2010 pursuant to SB 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 DWR to prepare a plan implementing urban water conservation requirements, which DWR did through the 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 required urban water providers to adopt a water conservation target of a 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

#### Assembly Bill 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 CEC to consult with 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

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 methane. Black carbon is the light-absorbing component of fine particulate matter produced during the incomplete combustion of fuels. SB 1383 required CARB, 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 established 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.<sup>20</sup> In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

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<sup>20</sup> California Air Resources Board, 2024, Short-Lived Climate Pollutant Reduction Strategy, <https://www.arb.ca.gov/cc/shortlived/shortlived.htm>, accessed September 24, 2024.

## GREENHOUSE GAS EMISSIONS

### Regional Regulations

#### *Plan Bay Area 2050*

MTC and the Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 on October 21, 2021. Plan Bay Area 2050 provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of SB 375. Under the Plan Bay Area 2050 strategies, just under half of all Bay Area households would live within one half mile of frequent transit by 2050, with this share increasing to over 70 percent for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. GHG emissions from transportation would decrease significantly as a result of these transportation and land use changes, and the Bay Area would meet the State mandate of a 19-percent reduction in per-capita emissions by 2035 — but only if all strategies are implemented.

To achieve this sustainable vision for the Bay Area, the Plan Bay Area land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. Parts of the EIR Study Area lies within the Railroad Corridor PDA.<sup>21</sup>

#### *Bay Area Clean Air Plan*

BAAQMD adopted the 2017 *Clean Air Plan, Spare the Air, Cool the Climate* (Clean Air Plan) on April 19, 2017. The 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the State's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

A comprehensive multipollutant control strategy has been developed to be implemented in the next three to five years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate

<sup>21</sup> Association of Bay Area Governments/Metropolitan Transportation Commission, January 2024 (updated), Priority Development Areas, [https://opendata.mtc.ca.gov/datasets/5572ccb7bfe2426eae086c35931f1d0e\\_0/explore?location=37.503733%2C-122.264927%2C14.44](https://opendata.mtc.ca.gov/datasets/5572ccb7bfe2426eae086c35931f1d0e_0/explore?location=37.503733%2C-122.264927%2C14.44), accessed September 24, 2024.

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matter, toxic air contaminants, and GHG from a full range of emission sources. These control measures cover the following sectors: (1) stationary (industrial) sources; (2) transportation; (3) energy; (4) agriculture; (5) natural and working lands; (6) waste management; (7) water; and (8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of “super-GHGs,” such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (i.e., gasoline, diesel, and natural gas).
  - Increase efficiency of the energy and transportation systems.
  - Reduce demand for vehicle travel and high-carbon goods and services.
- Decarbonize the energy system.
  - Make the electricity supply carbon-free.
  - Electrify the transportation and building sectors.

### *City/County Association of Governments of San Mateo County*

The City/County Association of Governments (C/CAG) of San Mateo County is responsible for providing countywide transportation planning. In San Mateo County, C/CAG is the Congestion Management Agency tasked with preparing the Congestion Management Plan (CMP) that describes the strategies to address congestion problems and monitoring compliance. C/CAG works cooperatively with MTC, transit agencies, local governments, Caltrans and BAAQMD. C/CAG’s latest congestion management program (CMP) is the 2023 San Mateo County CMP Update adopted October 2023.<sup>22</sup> C/CAG’s countywide transportation model must be consistent with the regional transportation model developed by the MTC with ABAG data and is used to help evaluate cumulative transportation impacts of local land use decisions on the CMP system. In addition, C/CAG’s updated CMP includes multimodal performance standards, trip reduction programs, and transportation demand management (TDM) strategies consistent with the goal of reducing regional VMT in accordance with SB 375.

### *Bay Area Commuter Benefits Program*

Under BAAQMD Regulation 14, Model Source Emissions Reduction Measures, Rule 1, Bay Area Commuter Benefits Program, employers with 50 or more full-time employees within the BAAQMD are required to register and offer commuter benefits to employees. In partnership with BAAQMD and MTC, the Rule’s purpose is to improve air quality, reduce GHG emissions, and decrease the Bay Area’s traffic congestion by encouraging employees to use alternative commute modes, such as transit, vanpool, carpool, bicycling, and walking. The benefits program allows employees to choose from one of four commuter benefit options, including a pre-tax benefit, employer-provided subsidy, employer-provided transit, and alternative commute benefit.

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<sup>22</sup> City/County Association of Governments of San Mateo County, 2023, *San Mateo County Congestion Management Plan*, <https://ccag.ca.gov/wp-content/uploads/2024/02/CCAGCMP2023Final-wAppendix.pdf>, accessed September 11, 2024.

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### Local Regulations

#### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.7.3, *Impact Discussion*.

#### *City of San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to GHG emissions as follows:

- Chapter 8.60, *Mandatory Organic Waste Disposal Reduction*, list requirements for organic waste generators, in compliance with state recycling laws, state organic recycling laws, and Short-Lived Climate Pollutant Reduction Act of 2016 to reduce solid waste generated in their jurisdictions.
- Chapter 15.20, *Streamlined Permitting Process for Electric Vehicle Charging Stations*, promotes the use of electric vehicles by creating an expedited, streamlined permitting process for electric vehicle charging stations while promoting public health and safety on the installation and use of such charging stations.
- Chapter 15.16, *Streamlined Permitting Process for Small Residential Rooftop Solar Systems*, allows for an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 to achieve time ly and cost-effective installations of small residential rooftop solar energy systems.
- Chapter 15.04, *Technical Building Codes*, adopts the Title 24, Part 6, the California Energy Code (2022 Edition) and Title 24, Part 11, CALGreen. Within this code, certain regulations are outlined about electric vehicle charging stations (EVCS) and how Electric vehicle supply equipment shall be installed in accordance with the CALGreen. Additionally, this code amends CALGreen Chapter 4, Residential Mandatory Measures, and Chapter 5, *Nonresidential Mandatory Measures*, to require all-electric buildings for new construction and qualifying alteration projects.<sup>23</sup> If either of these criteria are met within a three-year period, measured from the date of the most recent previously obtained permit final date, the project shall be subject to the all-electric buildings requirements. Exceptions include:
  - All residential buildings except Multi-Unit Residential buildings as defined by SCMC Section 18.40.020 may contain non-electric indoor and outdoor Cooking Appliances and indoor and outdoor Fireplaces.

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<sup>23</sup> Alterations that include replacement or addition of over 50 percent of the existing foundation for purposes other than a repair or reinforcement as defined in California Existing Building Code Section 202; or where over 50 percent of the existing framing above the sill plate is removed or replaced for purposes other than repair, shall be all-electric buildings.

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- If an applicant establishes by substantial evidence that an All-Electric Building is infeasible for the project due to exceptional or extraordinary circumstances particular to the project, then the Building Official may grant a modification. The design professional shall submit findings demonstrating a unique reason that makes the technical code impractical, that the modification is in conformity with the intent and purpose of the technical code, the modification shall be as narrow as possible so as to effectuate as much of a reduction in natural gas as possible, and that such modification does not lessen health, life safety, and fire safety requirements or any degree of structural integrity. If the Building Official grants a modification pursuant to this Exception, the applicant shall comply with Section 4.106.5.2.
- If the applicant establishes that there is not an all-electric prescriptive compliance pathway for the building under the California Building Energy Efficiency Standards, and that the building is not able to achieve the performance compliance standard applicable to the building under the Energy Efficiency Standards using commercially available technology and an approved calculation method, then the local enforcing agency may grant a modification. The applicant shall comply with Section 4.106.5.2.
- Laboratory areas with Non-Residential Buildings may contain non-electric Space Conditioning Systems. To take advantage of this exception, an applicant shall provide third party verification that the All-Electric space heating requirement is not cost effective and feasible. If the Building Official grants a modification pursuant to this Exception, the applicant shall comply with Section 5.106.1.3.2.
- Non-residential buildings containing a for-profit restaurant open to the public or an employee commercial kitchen containing cooking facilities with the purpose of preparing and serving food for employees and visitors may apply to the Building Official for a modification to install gas-fueled cooking appliances. This exception does not apply to typical employee breakrooms or other self-service kitchens. This request must be based on a business-related reason to cook with a flame that cannot be reasonably achieved with an electric fuel source
- If an applicant establishes by substantial evidence that an All-Electric Building is infeasible for the project due to exceptional or extraordinary circumstances particular to the project, then the Building Official may grant a modification. The design professional shall submit findings demonstrating a unique reason that makes the technical code impractical, that the modification is in conformity with the intent and purpose of the technical code, the modification shall be as narrow as possible so as to effectuate as much of a reduction in natural gas as possible, and that such modification does not lessen health, life safety, and fire safety requirements or any degree of structural integrity. If the Building Official grants a modification pursuant to this Exception, the applicant shall comply with Section 5.106.1.3.2.
- If the applicant establishes that there is not an all-electric prescriptive compliance pathway for the building under the California Building Energy Efficiency Standards, and that the building is not able to achieve the performance compliance standard applicable to the building under the Energy Efficiency Standards using commercially available technology and an approved calculation method, then the local enforcing agency may grant a modification. The applicant shall comply with Section 5.106.1.3.2.

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- Chapter 18.18, *Landscaping*, preserves, maintains, and provides regulations of trees for the health and welfare of the City; provide habitat; counteract the pollutants in the air; and maintain the climatic balance.
- Chapter 18.25, *Transportation Demand Management*, aims to reduce amount of traffic generated by new development and promotion of more efficient utilization of existing transportation facilities.

### *Climate Mitigation and Adaptation Plan*

Adopted in September 2021, the City of San Carlos 2021 Climate Mitigation and Adaptation Plan (CMAP) is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the city.<sup>24</sup> This CMAP is an update of the 2009 Climate Action Plan, providing updated information, an expanded set of GHG reduction strategies, climate adaptation strategies, and a planning horizon out to 2050.

The CMAP allows City decision-makers, staff, and the community to understand the sources and magnitude of local GHG emissions and identifies future strategies that, if implemented, will allow the community to achieve its emissions-reductions targets. In conjunction with existing local and state programs, these CMAP strategies provide a flexible path to reduce the community's GHG emissions to 107,920 MTCO<sub>2</sub>e by 2030 (49 percent below 2005 levels) and 36,060 MTCO<sub>2</sub>e by 2050 (83 percent below 2005 levels). The City's GHG reduction targets are to reduce emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, at a minimum. To ensure that the implementation process is efficient, the CMAP includes a work plan that identifies responsible departments, partners, time frames, and relative costs associated with each strategy.

### 4.7.1.4 EXISTING CONDITIONS

#### Community Emissions

Land uses in the EIR Study Area generate GHG emissions from natural gas used for energy, heating, and cooking; electricity usage; vehicle trips; and area sources such as landscaping and consumer cleaning products. Emissions associated with the EIR Study Area are shown in Table 4.7-4, *Existing Greenhouse Gas Emissions Inventory in the EIR Study Area*.

**TABLE 4.7-4 EXISTING GREENHOUSE GAS EMISSIONS INVENTORY IN THE EIR STUDY AREA**

Emissions Sector	Existing MTCO <sub>2</sub> e	
	City + SOI	% of Total
On-Road Transportation	87,892	12%
Electricity	16,359	5%
Natural Gas	43,761	12%

<sup>24</sup> City of San Carlos, September 2021, *2021 Climate Mitigation and Adaptation Plan*, <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/City%20Manager/Sustainability/Climate%20Action/CMAP%20Final.pdf>, accessed September 11, 2024.

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**TABLE 4.7-4 EXISTING GREENHOUSE GAS EMISSIONS INVENTORY IN THE EIR STUDY AREA**

Solid Waste/Landfills	9,065	3%
Water and Wastewater	1,007	<1%
Off-road Equipment	337,348	66%
Refrigerants	14,865	3%
Total Community Emissions	510,296	100%
Service Population (SP)	51,610	--
MTCO <sub>2</sub> e/SP	9.9	--

Notes: All numbers are rounded. Totals may not equal the sum of individual rows. Because the full extent of implementation of Chapter 15.04 of the San Carlos Municipal Code is unknown, all-electric designs were not accounted for in the emissions estimates herein. SOI = sphere of influence.

Source: Based on the emissions inventory and forecast being conducted for the City's GHG Reduction Strategy Plan, 2024. See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

The existing land uses in San Carlos consist of single-family and multi-family residences, office, commercial, industrial, airport, public and quasi-public, and parks and open space uses. Operation of these land uses generates GHG emissions from natural gas used for energy, heating, and cooking; electricity usage; vehicle trips for employees and residents; area sources such as landscaping and agricultural equipment and consumer cleaning products; water demand; waste generation; and solid waste generation.<sup>25</sup>

### 4.7.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant greenhouse gas emissions impact if it would:

- GHG-1 Generate GHG 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 GHG emissions.
- GHG-3 In combination with past, present, and reasonably foreseeable projects, result in cumulative GHG emission impacts in the area.

BAAQMD's *CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* (2022) contains instructions on how to evaluate, measure, and mitigate GHG impacts generated from land use development projects and plans. For the purposes of this analysis, the City of San Carlos is using BAAQMD's current GHG plan-level significance thresholds to evaluate the proposed project's potential impacts related to GHG emissions.

<sup>25</sup> Emissions from water demand and wastewater are emissions associated with electricity used to supply, treat, and distribute water.



## GREENHOUSE GAS EMISSIONS

### 4.7.2.1 GREENHOUSE GAS EMISSION IMPACTS

BAAQMD's 2022 *CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* (GHG Justification Report) contains instructions on how to evaluate, measure, and mitigate GHG impacts generated from land use development projects and plans. If a proposed plan cannot demonstrate consistency with the BAAQMD-recommended Criterion A or Criterion B, that plan would result in a potentially significant impact related to GHG emissions.

- A. The proposed plan must be consistent with a local GHG reduction strategy that meets the criteria under State California Environmental Quality Act (CEQA) Guidelines Section 15183.5(b); or
- B. The proposed plan must meet the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045.

The City's current CMAP stands as the City's local reduction strategy; however, the City's current CMAP does not demonstrate consistency with the latest legislative reduction target established by AB 1279 and cannot be used for a streamlined GHG analysis (Criterion A). To provide a conservative analysis of the proposed project's impacts in relation to carbon neutrality goals of AB 1279, the City has identified a "no net increase" threshold of zero (0 MTCO<sub>2</sub>e) for determining whether the proposed project could generate GHG emissions that would have a significance impact on the environment. Appendix D of the CARB 2022 Draft Scoping Plan recognizes that achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, may be an appropriate overall objective. Therefore, the no-net-increase threshold is consistent with the State's carbon neutrality goals under AB 1279 and provides the most conservative threshold for GHG emissions impacts under CEQA for the proposed project.

### 4.7.2.2 GREENHOUSE GAS PLAN CONSISTENCY

To determine whether the proposed project is consistent with the applicable plan or policy adopted for the purpose of reducing GHG emissions, this analysis evaluates the proposed project for consistency with applicable policies contained in the City's CMAP, the State's Scoping Plan, and *Plan Bay Area*.

## 4.7.3 IMPACT DISCUSSION

### Methodology

#### *Emissions Quantification*

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 proposed project. The EIR Study Area's GHG emissions inventory includes the following sectors:

- **Building Energy.** Emissions associated with electricity and natural gas use for residential and nonresidential land uses in the EIR Study Area were modeled based on data provided by PGE and PCE respectively, for years 2019 through 2023. Due to the 15/15 Rule, electricity use data for industrial land uses was aggregated with the nonresidential land uses in the data provided by PG&E

## GREENHOUSE GAS EMISSIONS

and PCE where available.<sup>26</sup> Forecasts are adjusted for increases in population for residential electricity and natural gas use and non-residential square footage for non-residential electricity and natural gas use in the EIR Study Area. Carbon intensity for years 2024 and 2045 are based on the carbon intensity for PG&E and PCE identified in the 2022 CalEEMod User's Guide, Appendix G and as provided by PCE.<sup>27</sup>

- **Transportation.** Transportation emissions forecasts were modeled using emissions data from CARB's EMFAC2021 V1.0.2 web database. Model runs were based on internal and external origin-destination (O-D) VMT data provided by Kittelson and Associates (see Appendix D, *Transportation Data*, of this Draft EIR) for calendar year 2024 (existing) and 2045 emission rates. The VMT is based on O-D using the San Mateo County Transportation Model and includes the full trip length for land uses in the city and a 50 percent reduction in the trip length for external-internal/internal-external trips based on the recommendations of CARB's Regional Targets Advisory Committee under SB 375.<sup>28</sup> 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. VMT for the proposed project includes all trip purposes, such as home-based trips, work commute trips, recreational trips, and school-related trips.
- **Off-Road Equipment.** OFFROAD2021, version 1.0.7., is a web database of equipment use and associated emissions for each county compiled by CARB. OFFROAD was used to estimate GHG emissions from lawn and garden, light commercial/industrial equipment, and construction equipment in the EIR Study Area. EIR Study Area emissions from lawn and garden equipment is based on the percentage of housing units in the city and sphere of influence (SOI) compared to San Mateo County and forecasted for each based on growth of housing units. EIR Study Area emissions attributable to light commercial/industrial equipment is estimated based on employment for the city and SOI as a percentage of San Mateo County and forecasted for each based on growth of employment. Construction equipment use is estimated based on housing permit data for the city and SOI compared to San Mateo County and assumes that construction emissions for the forecast year for each would be similar to historical levels.

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<sup>26</sup> 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.

<sup>27</sup> California Air Pollution Control Officers Association, 2022, *California Emissions Estimator Model User Guide for CalEEMod Version 2022.1*, 2022. <https://www.caleemod.com/user-guide>. Accessed October 31, 2024.

<sup>28</sup> For accounting purposes, there are two types of trips:

Internal origin-destination (O-D) VMT: Vehicle miles traveled associated with vehicle trips that both originate and terminate within the city limit.

External O-D VMT: Vehicle miles traveled associated with vehicle trips that either originate or terminate (but not both) within the city limit.

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- **Refrigerant Leakage.** Refrigerants are based on the statewide 2021 refrigerant use and statewide population based on the 2021 census data to derive emissions per person. Emissions from this sector are based on the Intergovernmental Panel on Climate Change Fourth Assessment Report (AR4) because the inventory is not available with AR5 GWPs.
- **Solid Waste Disposal.** GHG emissions from solid waste disposed of by residents and employees in the EIR Study Area were quantified based on the waste-in-place method. This method assumes that the degradable organic component in waste decays slowly throughout a few decades, during which CH<sub>4</sub> and biogenic CO<sub>2</sub> are formed. If conditions are constant, the rate of CH<sub>4</sub> production depends solely on the amount of carbon remaining in the waste. As a result, emissions of CH<sub>4</sub> from waste deposited in a disposal site are highest in the first few years, then gradually decline. Significant CH<sub>4</sub> production typically begins one or two years after waste disposal in a landfill and continues for 10 to 60 years or longer. Waste disposal in the city was averaged over several years to account for fluctuations in average annual solid waste disposal. Waste generated was based on data obtained from the California Department of Resources Recycling and Recovery (CalRecycle), to provide an estimate of GHG emissions for existing conditions (2024) for the City.

GHG emissions from solid waste disposal in the baseline year were modeled using CARB's Landfill Emissions Tool Version 1.9, which includes waste characterization data from CalRecycle. The landfill gas capture efficiency is based on CARB's Local Government Operations Protocol (LGOP), version 1.1. Because the landfill gas captured is not under the jurisdiction of San Carlos, 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. Total GHG emissions from waste disposal in 2045 were forecasted based on the percent increase in service population for the city. The emissions forecast does not account for reductions from increasing waste diversion.

**Water Use and Wastewater Treatment.** 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 proposed project water demand and wastewater generation in the City are based on the City's 2020 Urban Water Management Plan (UWMP). Existing residential and nonresidential water and wastewater demands based on proportion of net new water demand for each purveyor and existing demographics for EIR Study Area since the delineation of residential and non-residential uses are not known under each purveyor service area for existing conditions. Increase in water and wastewater demand based on growth in housing units and non-residential square footage. Electricity use from water use is estimated using energy rates identified by in the 2022 CalEEMod Users Guide.<sup>29</sup> Then energy is multiplied by the carbon intensity of energy. Wastewater treatment also results in direct CH<sub>4</sub> emissions from wastewater processing, which are based on the emission rates identified in the 2022 CalEEMod Users Guide.<sup>30</sup>

<sup>29</sup> California Air Pollution Control Officers Association, 2022, *California Emissions Estimator Model User Guide for CalEEMod Version 2022.1*, 2022. <https://www.caleemod.com/user-guide>. Accessed October 31, 2024.

<sup>30</sup> California Air Pollution Control Officers Association, 2022, *California Emissions Estimator Model User Guide for CalEEMod Version 2022.1*, 2022. <https://www.caleemod.com/user-guide>. Accessed October 31, 2024.

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Industrial sources of emissions that require a permit from BAAQMD are not included in the community inventory. Life-cycle emissions are not included in this analysis because not enough information is available for the proposed project; and therefore, they would be speculative.<sup>31</sup> 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.<sup>32</sup>

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GHG-1	The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
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A general plan is a long-range policy document that does not directly result in development without additional approvals. However, future development within the buildout horizon of the proposed project would contribute to global climate change through direct and indirect emissions of GHGs in the EIR Study Area. Any development proposed in the EIR Study Area must be analyzed for consistency with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA, if required; and obtain all necessary clearances and permits from regulatory agencies. Development under the buildout horizon of the proposed project is not linked to a specific time frame but is assumed over an approximately 20-year period through 2045. For the purposes of evaluating if the proposed project would achieve State's GHG reduction goal for year 2045 (AB 1279), forecasted GHG emissions for 2045 are considered.

As shown in Table 4.7-5, *EIR Study Area GHG Emissions Forecast*, the buildout projected for the proposed project would result in a net increase in GHG emissions from existing conditions; however, GHG emissions per service population (SP) would decrease. The primary reason for the increase in overall community-wide GHG emissions is the projected increase in VMT and use of offroad equipment for landscaping, commercial and light industrial activities, and construction, which are principally tied to the increase in service population through 2045 in the EIR Study Area. Due to the built-out nature of San Carlos and the presence of transit options, new development would take the form of infill and/or transit-oriented development. Nevertheless, the proposed project would result in a substantial increase in GHG

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<sup>31</sup> 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 lifecycle 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 the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials is also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (Source: California Office of Land Use and Climate Innovation [formerly the California Office of Planning and Research], 2008, *General Plan Guidelines Chapter 8: Climate Change*, [https://www.lci.ca.gov/docs/opr\\_c8\\_final.pdf](https://www.lci.ca.gov/docs/opr_c8_final.pdf), accessed October 31, 2024.).

<sup>32</sup> Particulate matter emissions, which include black carbon, are analyzed in Section 4.2, *Air Quality*. The majority of anthropogenic sources come from transportation—specifically, heavy-duty vehicles. The share of black carbon emissions from transportation is dropping rapidly and is expected to continue to do so between now and 2030 as a result of California's air quality programs. The remaining black carbon emissions will come largely from woodstoves/fireplaces, off-road applications, and industrial/commercial combustion (Source: California Air Resources Board, December 2022, *2022 Scoping Plan for Achieving Carbon Neutrality*, <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>, accessed September 24, 2024.).

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emissions and would not achieve the net zero threshold utilized in this analysis. As such, the proposed project would not advance the reduction in community-wide GHG emissions necessary to achieve the carbon neutrality goal by 2045. Consequently, the proposed project would not be consistent with the current long-term legislative reduction target under AB 1279.

The Land Use (LU) Element, Circulation and Scenic Highways (CSH) Element, Environmental Management (EM) Element, and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts from GHG emissions. The following General Plan goals, policies, and actions would serve to minimize GHG emissions and mobile-source emissions:

- **Goal LU-1:** Ensure a sustainable land use pattern.
  - **Policy LU-1.2:** Encourage development of higher density housing and support additional job growth within the TOD corridor while being sensitive to surrounding uses.
  - **Policy LU-1.3:** Ensure that development within the TOD corridor maintains and improves the mobility of people and vehicles along and across the corridor.
  - **Policy LU-1.4:** Establish and support the El Camino Real/Caltrain multi-modal TOD corridor for the purpose of the mobility of people and vehicles along and across the corridor.
  - **Policy LU-1.5:** Support land use patterns in the TOD corridor that will attract and serve riders of public transit.
  - **Policy LU-1.8:** As San Carlos' Climate Action Plan is updated over time, continue to include land use goals and measures in the Plan that contribute to a reduction in greenhouse gas emissions.
- **Goal LU-2:** Preserve and strengthen Downtown as the civic, cultural and social heart of the city.
  - **Policy LU-2.16:** Ensure adequate accessibility to the Downtown, which may include expanding automobile parking, bicycle parking and public transit.
- **Goal LU-3:** Promote connectivity and provide retail and services within walking distance of homes and employment areas.
  - **Policy LU-3.10:** Encourage the creation of safe, walkable environments that include elements such as wide, smooth sidewalks, good lighting, safe crosswalks, clear signage, curb bulb-outs, curb cuts, street furniture and trees and traffic-calming measures which allow people of all ages and abilities to exercise and safely access public transportation, community centers and schools and goods and services.
- **Goal LU-8:** Ensure excellence in all development design.
  - **Policy LU-8.18:** Encourage "green building" practices in new development and redevelopment, such as those that make a building more energy efficient and reduces its effect on human health and the environment through better siting, design, construction, maintenance and operation.

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TABLE 4.7-5 EIR STUDY AREA GHG EMISSIONS FORECAST

Emissions Sector	GHG Emissions (MTCO <sub>2</sub> e/Year)		
	Baseline (2024)	Year 2045	Net Change (2024 to 2045)
Transportation	87,892	118,138	30,246
Energy - Electricity	16,359	29,432	13,073
Energy - Natural Gas	43,761	74,930	31,169
Solid Waste (Waste Commitment)	9,065	16,470	7,405
Water and Wastewater	1,007	461	(545)
Off-road equipment	337,348	500,834	163,486
Refrigerants	14,865	22,396	7,531
Total Community Emissions	510,296	762,661	252,365
Net Zero Target Achieved?	—	—	No
Service Population (SP)	51,610	93,770	42,160
MTCO <sub>2</sub> e/SP	9.9	8.1	(1.8)

Notes: Emissions may not total to 100 percent due to rounding. Based on global warming potential (GWP) in the IPCC Fifth Assessment Report (AR5).  
Source: PlaceWorks, 2024. See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

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- **Goal CSH-3:** Maintain a street and highway system which accommodates future growth while maintaining acceptable levels of service.
  - **Action CSH-3.4:** The City shall encourage City employees to utilize alternative transportation through incentive, ridesharing and guaranteed ride home programs.
- **Goal CSH-5:** Ensure all modes of transportation connect safely and efficiently both within San Carlos and with neighboring jurisdictions.
  - **Policy CSH-5.3:** Support an interconnected system of pedestrian ways, paths, trails, bikeways and transit routes within the city and between adjacent communities.
- **Goal EM-2:** Promote healthy streams and riparian corridors.
  - **Action EM-2.4:** Develop a citywide policy that applies to all City properties and operations and establishes protocols to work with water service providers to determine appropriate location(s) for and implementation of a reclaimed (recycled) water distribution system (purple pipe) for landscaping and other non-potable water uses for residential, commercial and industrial consumers.
- **Goal EM-5:** Assure a high level of domestic water quality, promote water conservation and reduce toxics in run-off, including stormwater and the sanitary sewer system.
  - **Policy EM-5.3:** Promote the conservation and efficient use of water in new and existing residences and by commercial and industrial consumers.
  - **Policy EM-5.4:** Encourage the use of drought-tolerant plants and efficient watering techniques for all City landscaping.
  - **Policy EM-5.5:** Recycled water distribution system (purple pipe) should be used for landscaping and other non-potable water uses for residential, commercial and industrial customers, where technically and financially feasible.
  - **Action EM-5.6:** Evaluate potential incentives for the use of drought-tolerant landscaping and recycled water for landscape irrigation.
  - **Action EM-5.8:** Develop a recycled water implementation plan, which would identify potential sources and uses of recycled water, environmental benefits, capital and operating costs and potential utility providers.
- **Goal EM-6:** Support atmospheric conditions that are clean, healthful, provides maximum visibility and meets air quality standards.
  - **Policy EM-6.3:** Support the reduction of emissions of particulates from wood burning appliances, construction activity, automobiles, trucks and other sources.
  - **Policy EM-6.6:** BAAQMD recommended measures to reduce PM<sub>10</sub> and exhaust emissions associated with construction shall be applied to new development in San Carlos.
  - **Action EM-6.3:** For use on City-operated properties, explore options for landscaping equipment which will reduce contribution of air pollution. Encourage the same options by residents and businesses.

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- **Goal EM-7:** Develop a Greenhouse Gas Emissions Inventory and develop and implement a Climate Action Plan to address San Carlos' contribution to Global Climate Change.
  - **Policy EM-7.3:** Participate in regional, State and federal efforts to reduce greenhouse gas emissions and mitigate the impacts resulting from climate change.
  - **Policy EM-7.6:** Support greenhouse gas (GHG) emission reduction measures and climate change resiliency strategies that are cost effective and help create an environmentally sustainable, livable and equitable community. The cost of implementation to the City and the private sector shall be considered prior to the adoption of any GHG reduction strategy.
  - **Policy EM-7.7:** Collaborate with stakeholders and volunteers in the formulation and implementation of greenhouse gas reduction strategies.
- **Goal EM-9:** Reduce energy consumed citywide.
  - **Policy EM-9.2:** Support on-site generation of energy through alternative forms of energy production such as solar panels, wind turbines and biomass facilities.
  - **Policy EM-9.7:** Implement energy efficiency in City-owned and -operated facilities to reduce municipal energy costs and serve as a model for the community.
- **Goal EM-11:** Promote and expand public and alternative modes of transportation.
  - **Policy EM-11.2:** Work with transit service providers to increase the frequency, reliability and quality of transit service.
  - **Policy EM-11.5:** Evaluate and encourage a shuttle system in San Carlos to connect residential neighborhoods to commercial areas, transit and other destinations in San Carlos.
  - **Policy EM-11.7:** Support programs to reduce vehicle trips associated with transporting students to and from schools.
  - **Policy EM-11.8:** Promote a car sharing program.
  - **Policy EM-11.11:** Amend the Zoning Ordinance to create a Transportation Demand Management (TDM) Ordinance that contains strategies to reduce vehicle trips.
  - **Policy EM-11.12:** Include in the Transportation Demand Management Ordinance a requirement that new office development over a certain size include showers and safe and secure bike racks to encourage employees to bicycle to work.
  - **Action EM-11.5:** Encourage transit providers to utilize vehicles with low polluting technologies and to reduce or eliminate idling.
- **Goal EM-12:** Reduce solid waste disposal and increase recycling.
  - **Policy EM-12.2:** Minimize City government waste by expanding reduction, recycling and composting programs and practicing reuse.
  - **Policy EM-12.3:** Encourage the public and private sectors to utilize reusable, returnable, recyclable, environmentally-friendly products and repairable goods through incentives, educational displays and activities, as well as City purchasing policies and practices.



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- **Action EM-12.3:** Require adequate facilitation of recycling in all new development and new commercial tenancies.
- **Action EM-12.5:** Encourage building deconstruction in lieu of demolition. Require a construction and demolition debris waste plan to maximize recycling rates.
- **Action EM-12.6:** Encourage the use of recycled pavement and/or permeable products for public and private parking lots and driveways.
- **Action EM-12.7:** Support the commercial food scraps and organics recycling program.
- **Goal PR-4:** Provide for environmentally-sustainable parks and recreational programs.
  - **Policy PR-4.6:** Use sustainable materials—reused, renewable, locally-sourced and/or recycled—to the greatest extent possible.
  - **Policy PR-4.12:** Study the feasibility of reducing or eliminating City department use of gasoline-powered landscape maintenance equipment.

Future development projects within the buildout horizon of the proposed project would experience emission reductions from implementation of State measures and strategies to reduce Statewide GHG emissions, such as the LCFS mandate or RPS requirements. The proposed project's goals, and policies, listed above, would serve to further support potential GHG reductions for future development projects in the EIR Study Area. Moreover, as discussed further under impact discussion GHG-2, the City's CMAP establishes GHG emissions targets of 40 percent below 1990 levels (equal to 49 percent below 2005 levels) by 2030 and 80 percent below 1990 levels (or 83 percent below 2005 levels) by 2050. The CMAP includes strategies that would support the City's 2030 and 2045 GHG emissions reductions goals; however, the CMAP demonstrates consistency with current legislative reduction targets for 2030 and not the carbon neutrality goal for 2045. Moreover, the proposed project would facilitate population growth and development beyond what was accounted for in the CMAP. As shown in Table 4.7-5, the planned development in the EIR Study Area would result in a net increase in GHG emissions from 2024 through 2045, exceeding the no-net-increase significance threshold, and would not achieve carbon neutrality by 2045. Therefore, growth within the EIR Study Area associated with the proposed project could produce a cumulatively considerable impact on GHG emissions and this impact would be *significant*.

**Impact GHG-1:** Implementation of the proposed project would exceed the greenhouse (GHG) emissions threshold of no net increase from existing conditions and would therefore not make substantial progress toward the long-term GHG reduction goal under Senate Bill (SB) 32 or the carbon neutrality goal under Assembly Bill (AB) 1279.

**Mitigation Measure GHG-1:** The City of San Carlos shall prepare an update to its Climate Mitigation and Adaptation Plan (CMAP) to chart a trajectory to achieve the long-term GHG reduction goal set by AB 1279. The updated CMAP shall be completed within three years of certification of the General Plan EIR. The updated CMAP shall be updated every five years to ensure the City is monitoring the CMAP's progress toward achieving the City's GHG reduction target(s), and the City shall amend the CMAP if it is not achieving such targets. The CMAP update shall consider a trajectory consistent with the GHG emissions reduction goal established under AB 1279 for year 2045, and the latest applicable statewide legislative GHG emission reduction that may be in effect at the time of the CMAP update.

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The CMAP 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 and carbon neutrality goal for year 2045 of AB 1279.
- Plan implementation guidance that includes, at minimum, the following components consistent with the CMAP update:
  - Administration and Staffing
  - Finance and Budgeting
  - Timelines for Measure Implementation
  - Community Outreach and Education
  - Monitoring, Reporting, and Adaptive Management
  - Tracking Tools

**Significance with Mitigation:** Significant and unavoidable. Implementation of Mitigation Measure GHG-1 would ensure that the City prepares a CMAP update to chart a trajectory to achieve the long-term year 2045 GHG reduction goal and State's carbon neutrality goal set by AB 1279. However, given the growth in population and employment within the EIR Study Area and the magnitude of GHG emissions reductions needed to achieve the GHG reduction target, it is unknown at this time whether targets contained in the future CMAP update will be achieved and therefore GHG emissions are considered *significant and unavoidable*.

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GHG-2	The project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.
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This discussion analyzes whether the proposed project would conflict with the City's CMAP, as well as with other applicable plans adopted for the purpose of reducing GHG emissions, including CARB's Scoping Plan and MTC/ABAG's *Plan Bay Area 2050*.

### San Carlos Mitigation and Adaptation Plan

The City's CMAP, dated September 27, 2021, stands as a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the city.<sup>33</sup> The CMAP provides community-wide emissions forecasts for 2030 and 2050, relying on growth assumptions from the California Department of Finance and ABAG. This CMAP also establishes GHG emissions targets of 40 percent below 1990 levels (equal to 49 percent below 2005 levels) by 2030 and 80 percent below 1990 levels (or 83 percent below 2005 levels) by 2050.

The City's CMAP identifies 33 GHG reduction strategies and 8 goals to lower GHG emissions from a range of sources within the jurisdiction, including land use and transportation, energy efficiency, off-road, solid

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<sup>33</sup> City of San Carlos, 2021, *2021 Climate Mitigation and Adaptation Plan*, <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/City%20Manager/Sustainability/Climate%20Action/CMAP%20Final.pdf>, accessed September 11, 2024.

## GREENHOUSE GAS EMISSIONS

waste, water, and wastewater. A consistency analysis with the applicable CMAP goals and strategies is shown in Table 4.7-6, *Consistency Analysis with the City of San Carlos Climate Mitigation and Adaptation Plan*. As shown in Table 4.7-6, the proposed project would not conflict with the strategies of the CMAP such that it would obstruct its implementation.

**TABLE 4.7-6 CONSISTENCY ANALYSIS WITH THE CITY OF SAN CARLOS CLIMATE MITIGATION AND ADAPTATION PLAN**

Reduction Goal Applicable Strategy	Consistency Analysis
<b>Goal 1: Reduce energy use</b>	
Strategy 1: Regional Energy Conservation and Efficiency Programs. Promote available energy efficiency and conservation opportunities, incentives, and technical assistance for businesses and residents.	<b>Consistent.</b> Future development would be required to be constructed in accordance with current State and City building codes in existence at the time. In SCMC Chapter 15.04, <i>Technical Building Codes</i> , the code includes the City's local amendment to the State Building Code Title 24 to require all-electric buildings for many new construction developments and the mandatory measures for EV charging infrastructure in accordance with CALGreen. Lastly, General Plan Policy EM-8.18 encourages construction of more energy efficient buildings and Policy EM-9.7 supports energy efficiency in City-owned and -operated facilities.
Strategy 3: City Facilities. Ensure energy conservation and efficiency in City buildings and facilities.	<b>Consistent.</b> As described above, future development would be required to be constructed in accordance with current State and City building codes, as well as the SCMC Chapter 15.04, <i>Technical Building Codes</i> . In addition, General Plan Policy EM-9.7 would implement energy efficiency in City-owned and -operated facilities to reduce municipal energy costs.
<b>Goal 2: Transition to carbon-free energy sources</b>	
Strategy 4: Electrification. Transition to electricity as the primary energy source citywide.	<b>Consistent.</b> As described above, future development would be required to be constructed in accordance with current State and City building codes, as well as SCMC Chapter 15.04, <i>Technical Building Codes</i> . Additionally, Chapter 15.16, <i>Streamlined Permitting Process for Small Residential Rooftop Solar Systems</i> , provides a streamlined solar energy system permitting process that complies with the Solar Rights Act and AB 2188 for cost-effective solar energy systems installations.
Strategy 5: Building Codes. Advance electrification through local amendments to the California Building Code.	<b>Consistent.</b> As described above, future development would be required to be constructed in accordance with current State and City building codes, as well as SCMC Chapter 15.04, <i>Technical Building Codes</i> .
Strategy 6: Rooftop Solar. Continue to support and increase participation in rooftop and onsite solar energy systems in the community and at City facilities.	<b>Consistent.</b> As described above, future development would be required to be constructed in accordance with current State and City building codes, as well as SCMC Chapter 15.04, <i>Technical Building Codes</i> , and Chapter 15.16, <i>Streamlined Permitting Process for Small Residential Rooftop Solar Systems</i> . In addition, General Plan Policy EM-9.2 supports on-site generation of energy through alternative forms of energy production, such as solar panels.
<b>Goal 3: Promote energy resilience</b>	
Strategy 8: Battery Storage. Promote installation of small-scale onsite battery energy storage systems for existing and new development, including City facilities.	<b>Consistent.</b> As described above, future development would be required to be constructed in accordance with current State and City building codes, as well as SCMC Chapter 15.04, <i>Technical Building Codes</i> , and Chapter 15.16, <i>Streamlined Permitting Process for Small Residential Rooftop Solar Systems</i> . Additionally, General Plan Policy EM-9.2 supports on-site generation of energy through alternative forms of energy production, such as solar panels, wind turbines and biomass facilities.
<b>Goal 4: Promote sustainable development that reduces vehicle miles traveled</b>	
Strategy 11: Transit-Oriented Development. Encourage development of mixed-use	<b>Consistent.</b> The proposed project supports a variety of housing types, including Neighborhood Retail, Neighborhood Retail/Mixed Use, and

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**TABLE 4.7-6 CONSISTENCY ANALYSIS WITH THE CITY OF SAN CARLOS CLIMATE MITIGATION AND ADAPTATION PLAN**

projects, higher-density housing, and job growth within the General Plan's recognized Transit-Oriented Development (TOD) corridor (Planning Areas 1, 2, and 3) while being mindful of surrounding uses.	Mixed-Use development to encourage better connectivity to employment and commercial uses. General Plan Policies LU-1.2 through LU-1.5 encourage a balanced land use pattern in TOD corridors to improve mobility of people and vehicles. Additionally, Policies EM-11.7, EM-11.11, and LU-2.16, would help reduce VMT per service population and support convenient access to transit within the EIR Study Area.
Strategy 12: Active Transportation. Prioritize bicycling and walking as safe, practical, and attractive travel options citywide, as directed by the Bicycle and Pedestrian Master Plan.	<b>Consistent.</b> As listed under impact discussion GHG-1, the proposed project's policies would help minimize mobile-source emissions and promote active transportation initiatives. For example, General Plan Policies EM-11.2, EM-11.5, EM-11.11, LU-2.16, and CSH-5.3 would promote pedestrian access and public transportation, reduce vehicle congestion, and support TDM measures where feasible. Policies LU-1.2 through LU-1.5 encourage a balanced land use pattern in TOD corridors to improve mobility of people and vehicles.
Strategy 15: Public Transportation. Support improvements to public transit routes, services, and facilities to facilitate longer distance travel.	<b>Consistent.</b> As listed under impact discussion GHG-1, the proposed project's policies would help minimize mobile-source emissions and promote active transportation initiatives. For example, General Plan Policies EM-11.2, EM-11.5, EM-11.11, LU-2.16, and CSH-5.3 would promote pedestrian access and public transportation, reduce vehicle congestion, and support TDM measures where feasible.
	<b>Consistent.</b> As listed under impact discussion GHG-1, the proposed project's policies would help minimize mobile-source emissions and reduce VMT. For example, General Plan Policies EM-11.2, EM-11.5, EM-11.12, and LU-2.16, would promote pedestrian access and public transportation, reduce vehicle congestion, and support TDM measures for employees.
Strategy 17: Vehicle Miles Traveled. Reduce community-wide transportation-related emissions per resident and employee, with an emphasis on reductions from existing and new development in the city's core commercial, office, and industrial areas, including development on the east side.	<p>Future development under the proposed project would also be required to be constructed in accordance with current applicable area plans and San Mateo Citywide Transit Demand Management plan. This includes SCMC Chapter 18.25, <i>Transportation Demand Management</i>, which helps promote more efficient utilization of existing transportation facilities and ensure that new developments are designed in ways to maximize the potential for alternative transportation usage. Future development would be subject to the TDM requirements in place at the time of permit application. The City of San Carlos recently began a process to update its TDM requirements. While these updated requirements have not yet been adopted, they are anticipated to involve more strict trip reduction requirements in comparison to the City's current TDM requirements.</p> <p>Buildout within the buildout horizon of the proposed project would decrease VMT per service population when compared to existing conditions. In addition, the proposed project would include climate benefits, land use patterns, and goals and policies that align with the RTP/SCS.</p>
<b>Goal 5: Transition to low-carbon transportation</b>	
Strategy 18: Electric Vehicles. Support residents and business owners to transition to electric and plug-in hybrid vehicles.	<b>Consistent.</b> Advanced Clean Cars II would require new cars sold in 2035 and beyond to be zero-emission vehicles, which includes battery electric vehicles, plug-in hybrid electric vehicles and fuel cell electric vehicles. Future development under the proposed project would not obstruct implementation of Advanced Clean Cars II program since this is a requirement for auto manufacturers in California.

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**TABLE 4.7-6 CONSISTENCY ANALYSIS WITH THE CITY OF SAN CARLOS CLIMATE MITIGATION AND ADAPTATION PLAN**

	As described above, future development would be required to be constructed in accordance with current State and City building codes, as well as SCMC Chapter 15.04, <i>Technical Building Codes</i> . In addition, Chapter 15.20, <i>Streamlined Permitting Process for Electric Vehicle Charging Stations</i> , also promotes the use of electric vehicles by creating an expedited, streamlined permitting process for electric vehicle charging stations.
Strategy 19: Safe Routes to School. Continue to support the Safe Routes to Schools Program and reduction of GHG emissions from school-related trips.	<b>Consistent.</b> As listed under impact discussion GHG-1, the proposed project's policies would help minimize mobile-source emissions and promote safe routes to schools. For example, General Plan Policies EM-11.7 and LU-3.10 would support programs to reduce vehicle trips associated with transporting students and safe, walkable environments to access schools.
Strategy 20: City Fleet. Transition the City fleet to zero-emissions vehicles or low-carbon fuels, as feasible.	<b>Consistent.</b> As described above, future development would be required to be constructed in accordance with current State and City building codes, as well as SCMC Chapter 15.04, <i>Technical Building Codes</i> . In addition, General Plan Action EM-11.5, encourages transit providers to utilize vehicles with low polluting technologies.
Strategy 21: Car sharing. Promote electric vehicle and low-carbon fuel car-sharing programs.	<b>Consistent.</b> As listed under impact discussion GHG-1, the proposed project's policies and actions would help minimize mobile-source emissions and promote electric vehicle infrastructure. For example, General Plan Action EM-11.5 and CSH-3.4, and Policy EM-11.8, encourages transit providers to utilize vehicles with low polluting technologies and ridesharing programs.
<b>Goal 6: Support pollution-free outdoor equipment</b>	
Strategy 23: Clean-fuel construction and landscaping. Encourage hybrid and clean-fuel construction and landscaping equipment citywide.	<b>Consistent.</b> As listed under impact discussion GHG-1, the proposed project's policies and actions would help minimize emissions from construction activities and maintaining landscape. For example, General Plan Policy EM-6.3, EM-6.6, and LU-8.18 supports reduction of PM <sub>10</sub> and exhaust emissions from construction activities through better construction practices. Policy PR-4.12 and Action EM-6.3 encourages exploration of different landscaping equipment to reduce contribution to air pollution.
<b>Goal 7: Become a zero-waste community</b>	
Strategy 24: Zero-Waste City. Promote zero-waste initiatives in City operations and public events.	<b>Consistent.</b> Future development would be required to comply with AB 939 and divert 50 percent of all solid waste from landfills through source reduction, recycling, and composting. SCMC Chapter 8.60, <i>Mandatory Organic Waste Disposal Reduction</i> , contains a list requirements for organic waste generators, in compliance with State recycling laws, State organic recycling laws, and Short-Lived Climate Pollutant Reduction Act of 2016 to reduce solid waste generated in their jurisdictions. In addition, General Plan Policy PR-4.6, Policy EM-12.2, and Action EM-2.4 would encourage sustainable materials to minimize City government waste and implementation of reclaimed (recycled) water distribution systems for all City properties and operations.
Strategy 25: Material reuse and repair. Support community-led initiatives to create a material reuse and repair program and continue to educate community members about ways to make unwanted items available for reuse.	<b>Consistent.</b> As described above, future development project would be required to comply with AB 939 and SCMC Chapter 8.60, <i>Mandatory Organic Waste Disposal Reduction</i> . In addition, General Plan Policy EM-12.2 and EM-12.3 would encourage minimization of waste by expanding recycling programs, utilizing repairable goods, and practicing reuse.
Strategy 27: Construction and Demolition Waste. Increase the amount of waste recycled	<b>Consistent.</b> As described above, future development project would be required to comply with AB 939. SCMC Chapter 8.05, <i>Recycling and Diversion of Construction and Demolition Debris</i> , contains diversion

## GREENHOUSE GAS EMISSIONS

**TABLE 4.7-6 CONSISTENCY ANALYSIS WITH THE CITY OF SAN CARLOS CLIMATE MITIGATION AND ADAPTATION PLAN**

during construction and demolition of buildings.	requirements and waste management plan as part of the building or demolition permit process in alignment with AB 939. In addition, General Plan Action EM-12.3, EM-12.5, and EM-12.6 would require a construction and demolition debris waste plan to maximize recycling rates and encourage practices, such as building deconstruction or recycled pavement.
Strategy 28: Composting and Recycling. Partner with RethinkWaste to expand commercial and multi-family residential recycling and composting programs.	<b>Consistent.</b> Future development would be subject to the County’s waste requirements and Cal Recycle SB 1383 to reduce statewide disposal of organic waste (including paper, cardboard, yard materials, food scraps, and food-soiled paper). As described above, SCMC Chapter 8.60, <i>Mandatory Organic Waste Disposal Reduction</i> , contains a list requirements for organic waste generators, in compliance with State recycling laws, State organic recycling laws, and Short-Lived Climate Pollutant Reduction Act of 2016 to reduce solid waste generated in their jurisdictions. In addition, General Plan Policy EM-12.3, Action EM-12.3 and EM-12.7 would encourage minimization of waste by expanding recycling programs and commercial food scraps program.
<b>Goal 8: Reduce community-wide water use</b>	
Strategy 31: Water-efficient Retrofits. Encourage water-efficient retrofits of existing buildings by working with water providers and regional agencies.	<b>Consistent.</b> As described above, future development would be required to be constructed in accordance with current State and City building codes, as well as SCMC Chapter 15.04, <i>Technical Building Codes</i> . Chapter 15.04 provides regulations for energy efficiency, water efficiency, material conservation, environmental quality, and more. Additionally, General Plan Policy EM-5.3 and EM-5.5 would promote the conservation and efficient use of water in new and existing development.
Strategy 32: Water-wise Landscaping. Promote drought-tolerant and fire wise landscaping.	<b>Consistent.</b> As described above, future development would be required to be constructed in accordance with current State and City building codes, which include requirements related to water use for landscaping. This includes the California Water Code, California’s Model Water Efficient Landscape Ordinance standards, and SCMC 18.18, <i>Landscaping</i> , to implement water-conserving irrigation practices to conserve water and energy. Additionally, General Plan Policy EM-5.4 encourages the use of drought-tolerant plans and efficient watering techniques.
Strategy 33: Graywater and Recycled Water. Promote graywater and recycled water systems.	<b>Consistent.</b> As described above, future development would be required to be constructed in accordance with current State and City building codes, including the California Water Code, California’s Model Water Efficient Landscape Ordinance standards, and SCMC Chapter 18.18, <i>Landscaping</i> , to implement water features using recycled water. Additionally, General Plan Policy EM-5.5, and Action EM-5.6 and EM-5.8 would promote the use of recycled water distribution system for landscaping and other non-potable water uses.

Source: PlaceWorks, 2024; and City of San Carlos, September 2021, City of San Carlos Climate Mitigation and Adaptation Plan), <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/City%20Manager/Sustainability/Climate%20Action/CMAP%20Final.pdf>, accessed October 16, 2024.

As identified in Table 4.7-6, the proposed project would be consistent with the strategies in the City’s CMAP. Moreover, while growth in the EIR Study Area would cumulatively contribute to GHG emissions impacts, as discussed in impact discussion GHG-1, the Land Use (LU) Element, Circulation and Scenic Highways (CSH) Element, Environmental Management (EM) Element, and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to GHG emissions. The General Plan goals, policies, and actions listed in impact discussion GHG-1 would serve to reduce GHG emissions.

## GREENHOUSE GAS EMISSIONS

Implementation of the proposed project would not obstruct implementation of the CMAP, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### CARB Scoping Plan

The CARB Scoping Plan is applicable to State agencies and is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require local jurisdictions to adopt its policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by State agencies from the Scoping Plan result in GHG emissions reductions at the local level. Local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in building and landscape codes, and other statewide actions that affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the LCFS mandate and changes in the corporate average fuel economy standards.

Future development projects would be required to adhere to the statewide 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, SB 32, and AB 1279. For example, new buildings in the EIR Study Area would be required to meet the CALGreen and Title 24 Building Energy Efficiency Standards in effect at the time when applying for building permits. Furthermore, as discussed in impact discussion GHG-1, the Land Use (LU) Element, Circulation and Scenic Highways (CSH) Element, Environmental Management (EM) Element, and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to GHG emissions. The General Plan goals, policies, and actions listed in impact discussion GHG-1 would serve to reduce achieve GHG reduction goals. Implementation of the proposed project would not obstruct implementation of the CARB Scoping Plan, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### Plan Bay Area

*Plan Bay Area 2050* is the Bay Area's Regional Transportation Plan/Sustainable Community Strategy that identifies the sustainable vision for the Bay Area.<sup>34</sup> In addition to significant transit and roadway performance investments to encourage focused growth, *Plan Bay Area 2050* directs funding to neighborhood active transportation and complete streets projects, climate initiatives, lifeline transportation and access initiatives, safety programs, and PDA planning. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4, *Environmental Analysis*, of this Draft EIR, the EIR Study Area has one PDA that includes El Camino Real and the downtown area.

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<sup>34</sup> Association of Bay Area Governments and the Metropolitan Transportation Commission, October 2021, Plan Bay Area 2050, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed October 16, 2024.

## GREENHOUSE GAS EMISSIONS

Due to the built-out nature of San Carlos, future development in the EIR Study Area is projected to occur on infill parcels in previously developed areas. Given that future growth would be concentrated in areas currently served by public services and infrastructure, implementation of the proposed project would require less investment in infrastructure than if development was to occur on “greenfield” sites. Thus, the proposed project would be consistent with the overall goals of *Plan Bay Area 2050* in concentrating new development in locations where there is existing infrastructure and transit. The proposed project would not conflict with the land use concept plan in *Plan Bay Area 2050* and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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GHG-3	The proposed project would, in combination with past, present, and reasonably foreseeable projects, result in cumulative greenhouse gas emission impacts in the area
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Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under impact discussions GHG-1 and GHG-2 are not project-specific impacts to global warming, but the proposed project’s contribution to this cumulative impact. As described above, various goals and policies provided in the proposed project would help minimize GHG emissions generated by the residential and nonresidential land uses in the EIR Study Area.

As described under impact discussion GHG-1, the proposed project would contribute to cumulative global climate change impacts. This impact is *significant and unavoidable* and is identified and discussed in impact discussion GHG-1.

As described in impact discussion GHG-2, the proposed project would not obstruct the implementation of the City’s CMAP, CARB’s Scoping Plan, or *Plan Bay Area 2050*. This *less-than-significant* impact is identified and discussed in impact discussion GHG-2.



## HAZARDOUS AND HAZARDOUS MATERIALS

### 4.8 HAZARDOUS AND HAZARDOUS MATERIALS

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to hazards and hazardous materials, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project. A discussion of wildland fire hazards is provided in Chapter 4.18, *Wildfire*, of this Draft EIR.

#### 4.8.1 ENVIRONMENTAL SETTING

##### 4.8.1.1 REGULATORY FRAMEWORK

Various federal, State, regional and local agencies oversee hazards and hazardous materials issues in San Carlos and have established regulations at various levels designed to protect human health and the environment from the effects of hazardous materials. These agencies include the United States Environmental Protection Agency (USEPA), California Environmental Protection Agency (Cal/EPA) and the Office of Emergency Services. In California, the USEPA has granted most enforcement authority over federal hazardous materials regulations to Cal/EPA. The federal regulations are primarily codified in Title 40 of the Code of Federal Regulations (CFR).

The California Highway Patrol (CHP) and California Department of Transportation (Caltrans) enforce regulations specifically related to hazardous materials transport. Within Cal/EPA, the Department of Toxic Substances Control (DTSC) has primary authority to enforce hazardous materials regulations. State hazardous waste regulations are contained primarily in Title 22 of the California Code of Regulations (CCR).

The San Francisco Bay Regional Water Quality Control Board (RWQCB) is the lead agency responsible for identifying, monitoring and cleaning up leaking underground storage tanks in the Bay Area. In turn, local jurisdictions such as the County of San Mateo Health Services Agency (CSMHSA) and the Redwood City-San Carlos Fire Department (RC-SCFD) may take the lead agency role as a Local Oversight Program (LOP) entity, implementing State as well as local policies. In the city limit and Sphere of Influence (SOI), the lead agency for hazardous materials and any associated potential contamination to the environment is the CSMHSA.

#### Federal Agencies

Following are the federal agencies that oversee hazards and hazardous materials concerns.

##### *United States Environmental Protection Agency*

The USEPA is the federal agency responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. The legislation includes the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (commonly referred to as

## HAZARDOUS AND HAZARDOUS MATERIALS

“Superfund”), the Superfund Amendments and Reauthorization Acts of 1986, and the Resource Conservation and Recovery Act of 1986 (RCRA). The USEPA provides oversight and supervision for site investigations and remediation projects and has developed land disposal restrictions and treatment standards for the disposal of certain hazardous wastes.

### *United States Department of Transportation*

Transportation of chemicals and hazardous materials are governed by the United States Department of Transportation (DOT), which stipulates the types of containers and labeling and other restrictions to be used in the movement of such material on interstate highways.

### *Occupational Safety and Health Administration (OSHA)*

The Occupational Safety and Health Administration (OSHA) oversees administration of the Occupational Safety and Health Act, which requires specific training for hazardous materials handlers, provision of information to employees who may be exposed to hazardous materials, and acquisition of material safety data sheets from manufacturers. Material safety data sheets describe the risks associated with hazardous materials, and proper handling and procedures. Employee training must include response and remediation procedures for hazardous materials releases and exposures.

### *Federal Aviation Agency*

The Federal Aviation Agency (FAA) issues and enforces regulations covering manufacturing, operating, and maintaining aircrafts. The FAA also certifies airmen and airports (including helicopters) that serve air carriers and conducts research on and develops systems and procedures needed for a safe and efficient system of air navigation and air traffic control.

## State Agencies

Following are the State agencies and regulations pertaining to hazards and hazardous materials

### *California Environmental Protection Agency*

CalEPA was created in 1991 by the Governor’s Executive Order. Six boards, departments, and offices were placed under the CalEPA umbrella to create a cabinet-level voice for the protection of human health and the environment and to ensure the coordinated deployment of state resources. CalEPA oversees hazardous materials and hazardous waste compliance throughout California. Among those responsible for hazardous materials and waste management are the Department of Toxic Substances Control, the Department of Pesticide Regulation, and the Office of Environmental Health Hazard Assessment (OEHHA). CalEPA also oversees the unified hazardous waste and hazardous materials management regulatory program (Unified Program), which consolidates and coordinates:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- Underground Storage Tank Program
- Aboveground Petroleum Storage Tank Act
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Inventory Statements

## HAZARDOUS AND HAZARDOUS MATERIALS

- California Accidental Release Prevention Program

### *State Water Resources Control Board*

In California, the State Water Resources Control Board (SWRCB) has broad authority over water quality control issues for the state. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the federal government under the Clean Water Act. SWRCB's Underground Storage Tank (UST) program protects the public health and safety, and the environment from releases of petroleum and other hazardous substances from USTs. The program elements include:

- **Leak Prevention.** This program element includes requirements for tank installation, construction, testing, leak detection, spill containment, and overfill protection.
- **Cleanup.** Cleanup of leaking tanks often involves a soil and groundwater investigation and remediation, under the direction of a regulatory agency.
- **Enforcement.** The SWRCB aid local agencies in enforcing UST requirements.
- **Tank Tester Licensing.** Tank integrity testing is required by law, must meet the requirements of the SWRCB, and must be conducted by State licensed tank testers.

### *Office of Environmental Health Hazard Assessment*

The mission of the OEHHA is to protect and enhance public health and the environment by objective scientific evaluation of risks posed by hazardous substances.

### *Department of Toxic Substance Control*

The DTSC works in conjunction with the USEPA to enforce and implement specific laws and regulations pertaining to hazardous wastes. California legislation, for which the DTSC has primary enforcement authority, includes the Hazardous Waste Control Act and the Hazardous Substance Account Act. Most State hazardous waste regulations are contained in the CCR, Title 27. The DTSC generally acts as the lead agency for soil and groundwater cleanup projects and establishes cleanup and action levels for subsurface contamination that are equal to, or more restrictive than, federal levels.

### *Department of Pesticide Regulation*

The Department of Pesticide Regulation (DPR) has the primary responsibility for regulating all aspects of pesticide sales and use to protect public health and the environment. The DPR's mission is to evaluate and mitigate impacts of pesticide use, maintain the safety of the pesticide workplace, ensure product effectiveness and encourage the development and use of reduced-risk pest control practices while recognizing the need for pest management in a healthy economy.

### *California Air Resources Board and Bay Area Air Quality Management District*

San Carlos is in the Bay Area air basin. The California Air Resources Board (CARB) and Bay Area Air Management District (BAAQMD) have joint responsibility for developing and enforcing regulations to achieve and maintain State and federal ambient air quality standards in the district. CARB is responsible for enforcing the Clean Air Act and California's State Ambient Air Quality Standards. The BAAQMD is

## HAZARDOUS AND HAZARDOUS MATERIALS

responsible for regulating air emissions from stationary sources, monitoring air quality and reviewing air quality issues in environmental documents.

### *California Division of Occupational Safety and Health*

Like OSHA at the federal level, the California Division of Occupational Safety and Health (Cal/OSHA) is the responsible State agency for ensuring workplace safety. Cal/OSHA assumes primary responsibility for the adoption and enforcement of standards regarding workplace safety and safety practices. If a work site is contaminated, a site safety plan must be crafted and implemented to protect the safety of workers. Site safety plans establish policies, practices, and procedures to prevent the expose of workers and members of the public to hazardous materials originating from the contaminated site or building.

### *California Office of Emergency Services*

The California Office of Emergency Services (Cal OES) was established as part of the Governor's Office on January 1, 2009. It was created pursuant to Assembly Bill (AB) 38, which merged the duties, powers, purposes, and responsibilities of the former Governor's Emergency Management Agency with those of the Governor's Office of Homeland Security. Cal OES is responsible for the coordination of overall State agency response to major disasters in support of local government. The agency is responsible for ensuring the State's readiness to respond to and recover from all hazards—natural, man-made, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

### *California Department of Transportation and California Highway Patrol*

Caltrans and the CHP are the two State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies. Caltrans manages more than 50,000 miles of California's highways and freeways, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on highways, freeways, and intercity rail lines. The CHP enforces hazardous materials and hazardous waste labeling and packing regulations designed to prevent leakage and spills of materials in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP, which conducts regular inspections of licensed transporters to ensure regulatory compliance.

The State of California regulates the transportation of hazardous waste originating or passing through the state. Common carriers are licensed by the CHP, pursuant to Section 32000 of the California Vehicle Code. This section requires licensing every motor (common) carrier that transports, for a fee, in excess of 500 pounds of hazardous materials at one time, and every carrier, if not for hire, that carries more than 1,000 pounds of hazardous material of the type requiring placards. Common carriers conduct a large portion of the business in the delivery of hazardous materials.

## HAZARDOUS AND HAZARDOUS MATERIALS

### Local Agencies

Following are the regional and County-level agencies that oversee hazards and hazardous materials in San Mateo County.

#### *County of San Mateo Health Services Agency*

The CSMHSA, which includes the Division of Environmental Health, serves as the County Local Oversight Program within the County of San Mateo for hazardous materials and soil and groundwater contamination. This agency oversees several programs related to hazardous materials and releases, including the Hazardous Materials Business Plan Program, Hazardous Waste Generator Program, California Accidental Release Program, Hazardous Material Program Fees, Underground Storage Tank Program, Underground Storage Tanks Form Index, Groundwater Protection Program, Stormwater Protection Program, Emergency Response Program, Household Hazardous Materials Emergency Response Service, Household Waste Program, Universal Waste Program and Medical Waste Program.

The Hazardous Materials Division of the CSMHSA oversees hazardous materials permitting, hazardous materials oversight and hazardous materials facility closures. Virtually all hazardous waste use, spills and releases are reported to and regulated under the CSMHSA; however, the City of San Carlos falls under the jurisdiction of the RC-SCFD, which is the first responder to hazardous material spills and releases.

#### *San Mateo County Hazardous Materials Team*

The San Mateo County Hazardous Materials Team responds to hazardous materials emergencies throughout the county. Hazardous materials response, mitigation, and clean-up efforts for the county is managed by the Belmont Fire Protection District's Hazardous Materials Team through a contract between the County of San Mateo, the Emergency Services Council, and the Belmont Fire Protection District.

#### *Redwood City-San Carlos Fire Department*

The City of San Carlos is served by the RC-SCFD. The RC-SCFD, a joint powers and governmental agency, provides fire and emergency response services to the cities of Redwood City and San Carlos. The RC-SCFD is responsible for fire response, vehicle accidents, public assistance, medical emergencies, water rescue, and hazardous material response. In addition, the RC-SCFD is also responsible for disaster preparedness and other services, such as building plan review, fire prevention, and fire hydrant testing.

Chapter 4.14, *Public Services*, of this Draft EIR, provides additional details about fire protection resources and services in San Carlos.

#### *Regional Water Quality Control Board*

As previously described, the SWRCB contains several regional water boards. The City of San Carlos falls within Zone 2 (San Francisco Bay Region). The RWQCB generally oversees cases involving groundwater contamination. Within Zone 2, the CSMHSA handles most leaking UST (LUST) cases, so the RWQCB may oversee cases involving other groundwater contaminants—i.e. Spills, Leaks, Incidents, and Clean-up

## HAZARDOUS AND HAZARDOUS MATERIALS

cases. In the case of spills at a project site, the responsible party would notify the CSMHSA, and then a lead regulator (either the CSMHSA, RWQCB, or DTSC) would be determined.

### Federal Regulations

#### *Resource Conservation and Recovery Act of 1976*

Federal hazardous waste laws are generally promulgated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984. These laws provide for the “cradle to grave” regulation of hazardous waste. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. DTSC is responsible for implementing the RCRA program as well as California’s own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency (CUPA) program, CalEPA has in turn delegated enforcement authority to the San Mateo County Health Department, Environmental Health Services Division for State law regulating hazardous waste producers or generators in San Mateo County.

#### *Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act of 1986*

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as “Superfund,” on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. The Superfund Amendments and Reauthorization Act (SARA) amended the CERCLA on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites; required Superfund actions to consider the standards and requirements found in other State and federal environmental laws and regulations; provided new enforcement authorities and settlement tools; increased State involvement in every phase of the Superfund program; increased the focus on human health problems posed by hazardous waste sites; encouraged greater citizen participation in making decisions on how sites should be cleaned up; and increased the size of the trust fund to \$8.5 billion.

#### *Emergency Planning and Community Right-to-Know Act*

In 1986, Congress passed the Superfund Amendments and Reauthorization Act. Title III of this regulation was the “Emergency Planning and community Right-to-Know Act of 1986” (EPCRA). EPCRA was enacted by Congress as the national legislation on community safety. This law helps local communities protect public health, safety, and the environment from chemical hazards in their areas by requiring businesses to report the locations and quantities of chemicals stored onsite to state and local agencies. These reports help communities prepare to respond to chemical spills and similar emergencies.

Section 313 of EPCRA requires manufacturers to report releases to the environment (air, soil, and water) of more than 600 designated toxic chemicals, report offsite transfers of waste for treatment or disposal at separate facilities, develop pollution prevention measures and activities, and participate in chemical

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## HAZARDOUS AND HAZARDOUS MATERIALS

recycling. These annual reports are submitted to the USEPA and state agencies. EPCRA Sections 301 through 312 are administered by the USEPA's Office of Emergency Management. The USEPA's Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention Program.

The USEPA maintains and publishes a database that contains information on toxic chemical releases and other waste management activities by certain industry groups and federal facilities. This online, publicly available, national digital database is called the Toxics Release Inventory and was expanded by the Pollution Prevention Act of 1990.

Under the EPCRA 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. In California, SARA Title III is implemented through the California Accidental Release Prevention (CalARP) program. Under the CUPA program, the CalEPA has in turn delegated enforcement authority to the San Mateo County Health Department, Environmental Health Division for CalARP.<sup>1</sup>

### *Disaster Mitigation Act of 2000*

The Disaster Mitigation Act of 2000 requires state and local governments to prepare mitigation plans that identify hazards, potential losses, mitigation needs, goals, and strategies. It is intended to facilitate cooperation between state and local governments.

### *Toxic Substances Control Act*

The Toxic Substances Control Act of 1976 was enacted by Congress to give the USEPA the ability to track the 75,000 industrial chemicals currently produced by or imported into the United States. The USEPA repeatedly screens these chemicals and can require reporting or testing of any that may pose an environmental or human health hazard. It can ban the manufacture and import of chemicals that pose an unreasonable risk. Also, the USEPA has mechanisms in place to track the thousands of new chemicals that industry develops each year with either unknown or dangerous characteristics. It then can control

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<sup>1</sup> San Mateo County Health, 2022, Hazardous Waste Generator Program, <https://www.smchealth.org/hazwaste>, accessed October 3, 2022.

## HAZARDOUS AND HAZARDOUS MATERIALS

these chemicals as necessary to protect human health and the environment. The Act supplements other federal statutes, including the Clean Air Act and the Toxics Release Inventory under EPCRA.

### *Hazardous Materials Transportation Act*

The DOT regulates hazardous materials transportation under Title 49 of the CFR. State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are CHP and Caltrans. The California State Fire Marshal's Office has oversight authority for hazardous materials liquid pipelines. The California Public Utilities Commission has oversight authority for natural gas pipelines in California. These agencies also govern permitting for hazardous materials transportation.

### *Business Plan Act*

Both the federal government and the State of California require all businesses that handle more than a specified amount of hazardous waste materials or extremely hazardous materials—termed a reporting quantity—to submit a hazardous materials business plan to the local CUPA.

Such a plan must be submitted by businesses that handle hazardous materials or a mixture containing a hazardous material in quantities equal to or greater than:

- 500 pounds of a solid
- 55 gallons of a liquid
- 200 cubic feet of a compressed gas standard temperature and pressure
- The federal Threshold Planning Quantity for Extremely Hazardous Substances
- Radioactive materials in quantities for which an emergency plan is required per Parts 30, 40, or 70 of the CFR, Title 10, Chapter 1

The business plan must include the type and quantity of hazardous materials, a site map, risks of using these materials, spill prevention, emergency response, employee training, and emergency contacts.

### *Federal Response Plan*

The Federal Response Plan of 1992 is a signed agreement among 27 federal departments and agencies and other resource providers, including the American Red Cross, that: (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of State and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency. The Federal Response Plan is part of the National Response Framework, which was most recently updated in October 2019.



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## HAZARDOUS AND HAZARDOUS MATERIALS

### *The Stafford Act*

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) of 1988, as amended, authorizes federal government assistance for emergencies and disasters when State and local capabilities are exceeded. The Stafford Act forms the statutory authority for most federal disaster response activities, especially as they relate to the Federal Emergency Management Agency (FEMA) and FEMA programs.

### *National Response Framework*

The National Response Framework, published by the United States Department of Homeland Security and last updated October 2019, is a guide for the nation to respond to all types of disasters and emergencies.<sup>2</sup> This framework describes specific authorities and best practices for managing incidents that range from serious local or large-scale terrorist attacks to catastrophic natural disasters. In addition, the National Response Framework describes the principles, roles, and responsibilities, and coordinating structures for responding to an incident, and further describes how response efforts integrate with those of the other mission areas.

### *Asbestos-Containing Materials Regulations*

State agencies, in conjunction with the USEPA and OSHA, regulate removal, abatement, and transport procedures for asbestos-containing materials. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations; medical evaluation and monitoring are required for employees performing activities that could expose them to asbestos. The regulations include warnings and practices that must be followed to reduce the risk for asbestos emissions and exposure. Finally, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos. Requirements for limiting asbestos emissions from building demolition and renovation activities are specified in BAAQMD's Regulation 11, Rule 2 (Asbestos Demolition, Renovation and Manufacturing).<sup>3</sup> California Government Code Sections 1529 and 1532.1 provide for exposure limits, exposure monitoring, respiratory protection and good working practice by workers exposed to lead and asbestos-containing materials.

### *Natural Gas Pipeline Safety Act of 1968*

The Natural Gas Pipeline Safety Act of 1968 authorizes the DOT to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration (PHMSA) within the DOT develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system. DOT's and PHMSA's regulations governing

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<sup>2</sup> United States Department of Homeland Security, October 28, 2019, National Response Framework, [fema.gov/sites/default/files/2020-04/NRF\\_FINALApproved\\_2011028.pdf](https://fema.gov/sites/default/files/2020-04/NRF_FINALApproved_2011028.pdf).

<sup>3</sup> Bay Area Air Quality Management District (BAAQMD). Asbestos Demolition, Renovation and Manufacturing. <https://www.baaqmd.gov/permits/asbestos>, accessed October 25, 2025.

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natural gas transmission pipelines, facility operations, employee activities, and safety are found at CFR Title 49, Parts 190 through 192, Part 195, and Part 199.

### *Pipeline Safety Improvement Act of 2002*

The Pipeline Safety Improvement Act mandates that the DOT, the Department of Energy, and the National Institute of Standards and Technology in the Department of Commerce carry out a program of research, development, demonstration, and standardization to ensure the integrity of pipeline facilities.<sup>4</sup> The purpose of the Research and Design Program is to identify safety and integrity issues and develop methodologies and technologies to characterize, detect, and manage risks associated with natural gas and hazardous liquid pipelines.

### *Pipeline Inspection, Enforcement, and Protection Act of 2006*

The Pipeline Inspection, Enforcement, and Protection Act confirms the commitment to the Integrity Management Program and other programs enacted in the Pipeline Safety Improvement Act of 2002. The 2006 legislation includes provisions on:

- Preventing excavation damage to pipelines through the enhanced use and improved enforcement of State “One-Call” laws that preclude excavators from digging until they contact the State One-Call system to locate the underground pipelines;
- Minimum standards for Integrity Management Programs for distribution pipelines (including installation of excess flow valves on single-family residential service lines based on feasibility and risk);
- Standards for managing gas and hazardous liquid pipelines to reduce risks associated with human factors (e.g., fatigue);
- Authority for the Secretary to waive safety standards in emergencies;
- Authority for the Secretary to assist in restoration of disrupted pipeline operations;
- Review and update incident reporting requirements;
- Requirements for senior executive officers to certify operator integrity management performance reports; and
- Clarification of jurisdiction between states and PHMSA for short laterals that feed industrial and electric generator consumers from interstate natural gas pipelines.<sup>5</sup>

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<sup>4</sup> United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration, October 2017, Pipeline Safety Improvement Act of 2002, <https://www.phmsa.dot.gov/pipeline/congressional-mandates/pipeline-safety-improvement-act-2002>.

<sup>5</sup> Interstate Natural Gas Association of America, 2022, The Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, <https://www.ingaa.org/Pipelines101/143/861/851.aspx>.

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### *Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011*

The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 was designed to examine and improve the state of pipeline safety regulation. This act accomplishes the following:

- Reauthorizes PHMSA's federal pipeline safety programs through fiscal year 2015.
- Provides the regulatory certainty necessary for pipeline owners and operators to plan infrastructure investments and create jobs.
- Improves pipeline transportation by strengthening enforcement of current laws and improving existing laws where necessary.
- Ensures a balanced regulatory approach to improving safety that applies cost-benefit principles.
- Protects and preserves Congressional authority by ensuring certain key rulemakings are not finalized until Congress has an opportunity to act.<sup>6</sup>

## State Regulations

### *California Health and Safety Code and Code of Regulations*

The Hazardous Substances Account Act (California Health and Safety Code Sections 25300 et seq.) authorizes the State to clean up hazardous materials release sites—including abandoned sites—not qualifying for cleanup under CERCLA; provides funds to pay for the state's share of costs of CERCLA cleanups; and provides compensation to persons injured by hazardous materials releases.

California Health and Safety Code Chapter 6.95 and CCR Title 19 Section 2729 describe the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material inventory disclosing hazardous materials stored, used, or handled onsite. A business that uses hazardous materials, or mixtures containing them, in certain quantities must establish and implement a business plan.

CCR Title 8 Section 5191 requires that all laboratories have a written chemical hygiene plan as a fundamental chemical safety plan for the laboratory. The chemical hygiene plans are written programs that set forth procedures, equipment, personal protective equipment, and work practices that are capable of protecting employees from the health hazards presented by hazardous chemicals used in laboratories.

### *Tanner Act*

Although numerous state policies deal with hazardous waste, the most comprehensive is the Tanner Act (AB 2948), which was adopted in 1986. The Tanner Act governs the preparation of hazardous waste management plans and the siting of hazardous waste facilities in California. To be in compliance with the Tanner Act, local or regional hazardous waste management plans need to include provisions that define:

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<sup>6</sup> United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration, January 2020, Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, <https://www.phmsa.dot.gov/legislative-mandates/pipeline-safety-act/pipeline-safety-regulatory-certainty-and-job-creation-act>.

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1) the planning process for waste management, 2) the permit process for new and expanded facilities, and 3) the appeals process to the state available for certain local decisions.

### *California Building Code*

The state of California provided a minimum standard for building design through the California Building Code (CBC), which is in 24 CCR Part 2. The CBC is based on the International Building Code, modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Buildings are plan checked by city and county building officials for compliance with the CBC.

### *State Hazardous Waste Management Programs*

Numerous State programs regulate hazardous waste management.

### Underground Storage Tank Program

Releases of petroleum and other products from USTs are the leading source of groundwater contamination in the United States. The RCRA Subtitle I establishes regulations governing the storage of petroleum products and hazardous substances in USTs and the prevention and cleanup of leaks. In USEPA Region 9 (California, Arizona, Hawaii, Nevada, Pacific Islands, and over 140 tribal nations) the UST program operates primarily through state agency programs with USEPA oversight. In California, the SWRCB, under the umbrella of CalEPA, provides assistance to local agencies enforcing UST requirements. The purpose of the UST program is to protect public health and safety and the environment from releases of petroleum and other hazardous substances. The program consists of four elements: leak prevention, cleanup, enforcement, and tank tester licensing. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs, including groundwater analytical data, the surveyed locations of monitoring wells, and other data. The SWRCB's GeoTracker system currently has information submitted by responsible parties for over 10,000 LUST sites statewide and has been extended to include all SWRCB groundwater cleanup programs, including the LUST, non-LUST (Spill, Leaks, Investigation, and Cleanup), Department of Defense, and landfill programs.

### California Code of Regulations, Title 22, Division 4.5

CCR Title 22, Division 4.5, 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.

### Hazardous Materials Disclosure Programs

Both the federal and state governments and the state require all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials, termed a reporting quantity, to submit a hazardous materials emergency/contingency plan (also known as a hazardous materials

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business plan) to their local CUPA (CFR, USEPA, SARA, and Title III) (Health and Safety Code, Division 20, Chapter 6.95, Sections 2500-25520; 19 CCR, Chapter 2, Subchapter 3, Article 4, Sections 2729-2734).

### Hazardous Materials Business Plans

The hazardous materials business plan includes the business owner/operator identification page, hazardous materials inventory chemical description page, and an emergency response plan and training plan. Business plans must include an inventory of the hazardous materials at the facility. The entire hazardous materials business plan needs to be reviewed and recertified every three years. Business plans are required to 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 to follow for immediate notification to all appropriate agencies and personnel of a release, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information for all emergency coordinators of the business, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel. All facilities must keep a copy of their plan onsite.

Hazardous materials business plans are designed to be used for responding agencies during a release or spill to allow for a quick and accurate evaluation of each situation for appropriate response. Businesses that handle hazardous materials are required by law to provide an immediate verbal report of any release or threatened release of hazardous materials if there is a reasonable belief that the release or threatened release of hazardous materials poses a significant present or potential hazard to human health and safety, property, or the environment. If a release involves a hazardous substance listed in Title 40 of the CFR in an amount equal to or exceeding the reportable quantity for that material, a notice must be filed with the Cal OES within 15 days of the incident. Both the federal government (CFR) 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 CSMHSA. 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.

### Hazardous Materials Incident Response

Under Title III of SARA, the Local Emergency Planning Committee (LEPC) is responsible for developing an emergency plan for preparing for and responding to chemical emergencies in that community. The State

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Emergency Response Commission (SERC) established six emergency planning districts. The SERC appointed a LEPC for each planning district and supervises and coordinates their activities.

The emergency plan developed by the LEPCs must include:

- 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 exercises to test the plan.

The plan is reviewed by the SERC and publicized throughout the community. The LEPC is required to review, test, and update the plan each year.

### Hazardous Materials Spill/Release Notification Guidance

All significant spills, releases, or threatened releases of hazardous materials must be immediately reported. Federal and state emergency notifications are required for all significant releases of hazardous materials. 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. The following state statutes require emergency notification of a hazardous chemical release:

- 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 Code, Sections 13271, 13272
- California Labor Code, Section 6409.1(b)10

In addition, all releases that result in injuries or workers harmfully exposed must be immediately reported to California OSHA (California Labor Code, Section 6409.1[b]). Additional reporting requirements are in the Safe Drinking Water and Toxic Enforcement Act of 1986, better known as Proposition 65, and Section 9030 of California Labor Code.

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 Cal/OSHA pursuant to the California Labor Code Section 6409.1(b).

### California Accidental Release Prevention Program

The CalARP became effective on January 1, 1997, in response to Senate Bill (SB) 1889. CalARP replaced the California Risk Management and Prevention Program. Under CalARP, the Governor's Office of Emergency Services must adopt implementing regulations and seek delegation of the program from the

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USEPA. 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 migration measures that can be implemented to reduce this accident potential. In most cases, local governments will have the lead role for working directly with businesses in this program. The CSMHSA is the CUPA designated as the administering agency for CalARP.

### *Government Code Section 65302*

Government Code Section 65302 requires the Safety Element of a General Plan to address evacuation routes. The California Department of Fire and Fire Protection (CAL FIRE) Safety Element checklist also requires cities to address evacuation routes. In addition, SB 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 Regulations

### *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan*

The purpose of hazard mitigation planning is to reduce the loss of life and property by minimizing the impact of disasters. The San Mateo County Multi-Jurisdictional Local Hazard Mitigation Plan (MJHMP), updated in 2021 in accordance with the federal Disaster Mitigation Action of 2000, provides an assessment of natural hazards in the county and a set of short-term mitigation actions to reduce or eliminate the long-term risk to people and property from these hazards.

### *Airport Land Use Compatibility Plan*

The Airport Land Use Compatibility Plan (ALUCP) covering all three public airports in San Mateo County was approved by the City/County Association of Governments of San Mateo County (C/CAG) in December 1996. The C/CAG is the Airport Land Use Commission (ALUC) responsible for promoting land use compatibility around the County's airports in order to minimize public exposure to excessive noise and safety hazards. The C/CAG has since adopted updated ALUCPs for San Francisco International Airport (November 2012), Half Moon Bay Airport (September 2014), and San Carlos Airport (October 2015).

The updated ALUCP for San Carlos Airport describes a series of land use safety and compatibility zones and associated guidelines for development around the San Carlos Airport that are intended to prevent development that is incompatible with airport operations.<sup>7</sup> These regulations include height restrictions based on proximity to the airport and flight patterns. The ALUCP for the San Carlos Airport delineates two Airport Influence Areas (AIA), Area A and Area B, within proximity to the airport. As a requirement for development located in Area A, the presence of existing airports within two miles of the property must be disclosed in the notice of intention to offer the property for sale. For development located

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<sup>7</sup> City/County Association of Governments of San Mateo County, 2015, *Comprehensive Airport Land Use Compatibility Plan For the Environs of San Carlos Airport*, [https://ccag.ca.gov/wp-content/uploads/2015/11/SQL\\_FinalALUCP\\_Oct15\\_read.pdf](https://ccag.ca.gov/wp-content/uploads/2015/11/SQL_FinalALUCP_Oct15_read.pdf), accessed March 7, 2022.

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within Area B of the AIA, the C/CAG Board shall exercise its statutory duty to review proposed land development proposals, among other plans, ordinances, amendments, and actions.

### Local Regulations

#### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.8.3, *Impact Discussion*.

#### *City of San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to hazards and hazardous materials as follows:

- Section 2.28.080, *Emergency Plan*, states that the City of San Carlos Disaster Council is responsible for the development of the City's emergency plan, which shall provide the effective mobilization of all the resources of the City, both public and private, to meet any condition constituting a local emergency.
- Title 13, *Public Services*, requires that individual business plans for any facility subject to the hazardous materials inventory response program include a program for compliance.
- Title 18, *Zoning*, regulates what types of properties are permitted to use hazardous materials and specifically regulates the location of these types of facilities to ensure that they do not endanger the general public and that they are separate from sensitive land uses such as schools.

#### *San Carlos Emergency Operations Plan*

The City Council adopted the City of San Carlos Emergency Operations Plan (EOP) in March 2022. The EOP establishes the emergency management structure utilized for prevention, protection, response, and recovery of emergencies affecting the City; the operational concepts and procedures associated with day-to-day field response to emergencies by City departments; and the policies and procedures for the San Carlos Emergency Center activities. The plan also identifies the policies, responsibilities, and procedures utilized to protect the health and safety of residents, public and private property, and the environmental effects of natural, technological, and man-made emergencies and disasters, as well as defines the procedures for a disaster recovery process.



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### 4.8.1.2 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 wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly (22 CCR Chapter 11, Article 2, Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific CCR Title 22 criteria.

Past industrial or commercial activities on a site could have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination. Hazardous materials may also be present in building materials of older structures and released during building demolition activities. If improperly handled, hazardous materials and wastes can cause public health hazards when released to the soil, groundwater, or air. The four basic exposure pathways through which an individual can be exposed to a chemical agent include inhalation, ingestion, bodily contact, and injection. Exposure can come as a result of an accidental release during transportation, storage, or handling of hazardous materials. Disturbance of subsurface soil during construction can also lead to exposure of workers or the public from stockpiling, handling, or transportation of soils contaminated by hazardous materials or waste from previous spills or leaks.

#### Hazardous Materials Sites

California Government Code Section 65962.5 requires the CalEPA to compile, maintain, and update specified lists of hazardous material release sites. The California Environmental Quality Act (CEQA; California Public Resources Code Section 21092.6) requires the lead agency to consult the lists compiled pursuant to Government Code Section 65962.5 to determine whether the project and any alternatives are identified on any of the following lists:

- **USEPA National Priorities List.** The USEPA's National Priorities List includes all sites under the USEPA's Superfund program, which was established to fund cleanup of contaminated sites that pose risks to human health and the environment.
- **USEPA CERCLIS and Archived Sites.** The USEPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) includes a list of 15,000 sites nationally identified as hazardous sites. This would also involve a review for archived sites that have been removed from CERCLIS due to No Further Remedial Action Planned status.
- **USEPA RCRIS (RCRA Info).** The Resource Conservation and Recovery Act Information System (RCRIS or RCRA Info) is a national inventory system about hazardous waste handlers. Generators, transporters, handlers, and disposers of hazardous waste are required to provide information for this database.
- **DTSC Cortese List.** The DTSC maintains the Hazardous Waste and Substances Sites (Cortese) list as a planning document for use by the State and local agencies to comply with the CEQA requirements in

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providing information about the location of hazardous materials release sites. This list includes the Site Mitigation and Brownfields Reuse Program Database.

- **DTSC HazNet.** The DTSC uses this database to track hazardous waste shipments.
- **SWRCB LUSTIS.** Through the Leaking Underground Storage Tank Information System, the SWRCB maintains an inventory of USTs and LUSTs, which tracks unauthorized releases.

The required lists of hazardous material release sites are commonly referred to as the “Cortese List,” named after the legislator who authored the legislation. Because the statute was enacted more than 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information required in the Cortese List does not exist. Those requesting a copy of the Cortese Lists are now referred directly to the appropriate information resources contained on websites hosted by the boards or departments referenced in the statute, including DTSC’s online EnviroStor database and the SWRCB’s online GeoTracker database. These two databases include hazardous material release sites, along with other categories of sites or facilities specific to each agency’s jurisdiction.

A search of the online EnviroStor and GeoTracker databases on October 17, 2024, identified 159 hazardous materials sites within the EIR Study Area.<sup>8,9</sup> Of the 159 sites, 31 are designated as “open” on Geotracker and four sites are designated as “active” on Envirostor. The remaining 124 sites are designated as “closed” or “completed – case closed,” “Inactive – Needs Evaluation,” “Inactive-Withdrawn,” “No Further Action,” “No Action Required,” and “Certified.” The full list of the 35 hazardous materials sites designated as “open” or “active” are included in Table 4.8-1, *Hazardous Material Sites in the EIR Study Area*. The majority of the 35 listed sites are classified as clean-up program sites, where recent or historical unauthorized releases of pollutants to the environment, including soil, groundwater, surface water, and sediment, have occurred. Many of these sites are existing or former dry cleaners, gas stations, plant nurseries, or light industrial uses typical of urban and suburban communities in the Bay Area.

**TABLE 4.8-1 HAZARDOUS MATERIAL SITES IN THE EIR STUDY AREA**

ID	Site Name	Address	Site Type	Status
<b>Envirostor</b>				
60001135	Tanklage Square	837 Industrial Road	Voluntary Cleanup	Active
60003201	941 Bransten Road	941 Bransten Road	Voluntary Cleanup	Active
80001427	G-C Lubricants Co	977 Bransten Rd	Corrective Action	Active
80001743	California Oil Recyclers Inc	977a Bransten Rd	Corrective Action	Active
<b>Geotracker</b>				
T10000013786	1091 Industrial Owner, LLC Property	1091 Industrial Road	Cleanup Program Site	Open - Long Term Management

<sup>8</sup> Department of Toxic Substances Control, 2024, EnviroStor, <https://www.envirostor.dtsc.ca.gov/public/>, accessed October 17, 2024.

<sup>9</sup> State Water Resources Control Board, 2024, GeoTracker, <https://geotracker.waterboards.ca.gov/>, accessed October 17, 2024.

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**TABLE 4.8-1 HAZARDOUS MATERIAL SITES IN THE EIR STUDY AREA**

ID	Site Name	Address	Site Type	Status
T10000012536	1409 & 1411 Industrial Road	1409-1411 Industrial Road	Cleanup Program Site	Open - Site Assessment
T10000021229	642 Quarry Owner, LLC	642 Quarry Road	Cleanup Program Site	Open - Long Term Management
T10000022795	681 Old County Road Property	681 Old County Road	Cleanup Program Site	Open - Site Assessment
T10000018732	888 Bransten Rd	888 Bransten Road	Cleanup Program Site	Open - Remediation
T0608100054	B & H Technical Ceramics	390 Industrial Rd	Lust Cleanup Site	Open - Eligible For Closure
T10000011493	Blu-White Laundry (Former)	1161 Brittan Ave	Cleanup Program Site	Open - Site Assessment
T10000004555	California Plating (Former)	1083 American	Cleanup Program Site	Open - Remediation
T0608198024	Carlos Cleaners	1000 Laurel	Cleanup Program Site	Open - Site Assessment
T10000021430	Cherry Street Commons LP	1232-1244 Cherry Street	Cleanup Program Site	Open - Long Term Management
SLT20256352	Circuits Facility	641 Quarry Rd	Cleanup Program Site	Open - Inactive
T10000017289	Country Cleaners (Former)	1239 Laurel St	Cleanup Program Site	Open - Site Assessment
SL18392812	Delta Star	270 Industrial Rd	Cleanup Program Site	Open - Remediation - Land Use Restrictions
T0608103289	Eaton Cleaners & Dyers (Former)	1752-1754 Laurel	Cleanup Program Site	Open - Assessment & Interim Remedial Action
T10000009575	Former Industrial Plating	803 American St	Cleanup Program Site	Open - Site Assessment
T10000003223	Former Sterling Screw	925 Tanklage Road	Cleanup Program Site	Open - Site Assessment
SL599992810	G.N. Renn Bulk Storage Tanks, San Carlos	833 Old County Road	Cleanup Program Site	Open - Site Assessment
T10000022854	Glenny Properties	925 Terminal Way	Cleanup Program Site	Open - Site Assessment
T0608191590	Home Depot Gte Lenkurt	1000 Howard Ave	Cleanup Program Site	Open - Inactive
T0608191580	Kelly Moore Paint Company Inc	919 Old County Rd	Cleanup Program Site	Open - Remediation
SL1821P612	Litton Electron Devices	960 Industrial Rd	Cleanup Program Site	Open - Remediation
T10000011444	Lovan Trust Property	672 Laurel Street	Cleanup Program Site	Open - Eligible For Closure - Land Use Restrictions
SL0608183917	Peninsula Laboratories (Former)	601 Taylor Way	Cleanup Program Site	Open - Remediation
T0608146836	Praxair Distribution (Former)	767 Industrial	Cleanup Program Site	Open - Verification Monitoring
SL18390810	Putnam Honda	495 Bragato Rd	Cleanup Program Site	Open - Remediation
T10000005837	Pyromet Inc. (Former)	595 Industrial Road	Cleanup Program Site	Open - Long Term Management
T10000001707	San Carlos Transit Village	281-633 El Camino Real	Cleanup Program Site	Open - Assessment & Interim Remedial Action
T10000022853	Trac Properties	915 Terminal Way	Cleanup Program Site	Open - Site Assessment
T10000022852	Vera Lindburg Trust	909 Terminal Way	Cleanup Program Site	Open - Site Assessment
T10000017554	White Oak Cleaners	1200 Belmont Ave	Cleanup Program Site	Open - Site Assessment
T10000022476	Cordilleras Health Facility	200 Edmonds Road	LUST Cleanup Site	Open-Site Assessment

Source: State Water Resources Control Board, 2024; Department of Toxic Substances Control, 2024.

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### Hazardous Materials Generators

The USEPA 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.

### Potential Hazardous Building Materials

As stated in Chapter 4.4, *Cultural Resources*, of this Draft EIR, some buildings in the city were built before the 1970s; based on the ages of these buildings, there is a potential for building materials to contain asbestos or lead-based paint (LBP). A potential release of hazardous materials could occur when asbestos containing materials (ACM) or LBP are disturbed during renovation or demolition activities. This disturbance could be harmful to human health. Typical hazardous materials of concern for existing older structures in the city include the following:

- **Asbestos** is a mineral fiber that is carcinogenic and harmful to respiratory health. Because of its fiber strength and heat resistance, it was widely used in a variety of building construction materials for insulation and as a fire-retardant, as well as in friction and heat-resistant products. Use of asbestos in the manufacturing of these products was common throughout California, until 1977, when it was banned. Older buildings constructed prior to 1978 could contain ACM. Asbestos can be released when ACMs are disturbed by cutting, sanding, drilling, or other remodeling activities. Improper attempts to remove these materials can release asbestos fibers into the air, increasing asbestos levels and affecting indoor air quality.
- **Lead** is a recognized harmful environmental pollutant that can pose a hazard when exposed through air, drinking water, food, contaminated soil, deteriorating paint, and dust. Lead was widely used in paint, gasoline, water pipes, and many other products prior to documentation of its health hazards. The use of LBP was banned in California in 1978, and therefore, buildings constructed prior to 1978 could contain LBP. If LBP is improperly removed from surfaces by dry scraping or sanding, LBP can be inhaled or otherwise absorbed into the body and could pose a potential public health risk.
- **Mold** can impair indoor air quality. The presence of visible water damage, damp materials, visible mold, or mold odor in buildings increases the potential risks of respiratory disease of occupants. According to the California Department of Public Health, known health risks include the development of asthma, allergies, and respiratory infections, the triggering of asthma attacks, and increased wheezing, coughing, difficulty breathing, and other symptoms.
- **Polychlorinated Biphenyls (PCBs)** are synthetic chemicals that were manufactured for use in various industrial and commercial applications—including oil in electrical and hydraulic equipment, and plasticizers in paints, plastics, and rubber products—because of their non-flammability, chemical stability, high boiling point, and electrical insulation properties. When released into the environment, PCBs persist for many years and bioaccumulate in organisms. The USEPA has classified PCBs as probable human carcinogens. In 1979, the USEPA banned the use of PCBs in most new electrical equipment and began a program to phase out certain existing PCB-containing equipment.

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- **Radon** is a naturally occurring odorless, tasteless, and invisible gas produced from the decay of uranium in soil and water. Structures placed on native soils with elevated levels of radon can be impacted by the intrusion of radon gas into breathing spaces of the overlying structures, which can cause lung cancer. San Mateo County is listed as a Zone 2 county, which predicts an average indoor radon screening level between 2 and 4 pCi/L, which is within the recommended levels assigned by the USEPA for radon testing.<sup>10</sup>

### Schools

As previously described in Chapter 4.2, *Air Quality*, of this Draft EIR, some land uses are considered more sensitive to airborne hazardous materials than others due to the types of population groups or activities involved. Because sensitive population groups include children, CEQA requires an evaluation of hazardous emissions or handling hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school, private or public.

The City of San Carlos is served by two public school districts: the San Carlos School District and the Sequoia Union High School District.

### Airport Hazards

The San Carlos Airport is located within the San Carlos city limit, east of US Highway 101, along the bay shoreline. The 160-acre airport is located on land owned by the County of San Mateo and managed by the County Public Works Department. Primary uses of the San Carlos Airport include private planes that are utilized for both business and recreation. The airport also allows private jets under 12,500 pounds to land and take off at any time, but activities such as student training are limited to daytime to meet noise abatement requirements. Additional airport services include emergency response functions such as Air-Ambulance, Medivac flights and law enforcement patrols.

### Pipelines

Pipelines of concern carry hazardous liquids and/or gases that can be harmful to life and property. The EIR Study area contains hazardous pipelines areas. According to the DOT National Pipeline Mapping System, four gas transmission pipelines run through the EIR study area. This includes one along Brittan Avenue, through Palomar Park, and continuing west between Pulgas Ridge Open Space Preserve and Edgewood Park and Natural Preserve. A second pipeline is located west of the State Route 280. Another gas transmission pipeline runs along Old Country Road in the northern end of the City, and one that connects from Old Country Road, following along Bing Street to continue east along Industrial Road.<sup>11</sup>

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<sup>10</sup> Environmental Protection Agency (EPA). 2024 (accessed). California- EPA Radon Zones. <https://www.epa.gov/sites/default/files/2014-08/documents/california.pdf>

<sup>11</sup> United States Department of Transportation (USDOT). 2024. National Pipeline Mapping System (NPMS). Public Viewer. <https://pvnpm.phmsa.dot.gov/PublicViewer/>

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### 4.8.2 STANDARDS OF SIGNIFICANCE

Impacts related to wildland fires are fully discussed in Chapter 4.18, *Wildfire*, of this Draft EIR. Therefore, the following standard is not discussed in this chapter.

Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

The proposed project would result in a significant hazards and hazardous materials impact if it would:

- HAZ-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- HAZ-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.
- HAZ-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- HAZ-4 Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- HAZ-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 the project result in a safety hazard or excessive noise for people residing or working in the project area.
- HAZ-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- HAZ-7 In combination with past, present, and reasonably foreseeable projects, result in cumulative hazards and hazardous materials impacts in the area.

### 4.8.3 IMPACT DISCUSSION

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HAZ-1	The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
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### Construction

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. In the event of a potential release and cleanup of a hazardous material in the construction process, the San Mateo County Health Department, Environmental Health Services Division would provide oversight of environmental investigations and cleanup of contaminated sites. Project

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construction workers would be trained in safe handling and hazardous materials use pursuant to Cal/OSHA requirements.

To prevent hazardous conditions, existing local, state, and federal laws—such as those listed under Section 4.8.1.1, *Regulatory Background*—would be enforced at the construction sites, as well as during the transport and disposal of hazardous materials. 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. 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 must be immediately contained, the hazardous material identified, and the material remediated in compliance with state and local regulations for that contaminant. All contaminated waste must be collected and disposed of at an appropriately licensed disposal or treatment facility. Strict adherence to all EOP requirements set by San Mateo County would also be required throughout the duration of project construction.

Furthermore, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to hazards and hazardous materials, including transport, use, and disposal. The following General Plan goal, policies, and actions would serve to minimize potential adverse impacts related to the routine transport, use, or disposal of hazardous materials during construction:

- **Goal ESPS-5:** Protect the community from the harmful effects of hazardous materials.
  - **Policy ESPS-5.2:** Require producers of and users of hazardous materials in San Carlos to conform to all local, State and federal regulations regarding the production, disposal, and transportation of these materials.
  - **Policy ESPS-5.3:** Mitigate hazard exposure to and from new development projects through the environmental review process, design criteria, and standards enforcement.
  - **Policy ESPS-5.5:** Where deemed necessary, based on the history of land use, require site assessment for hazardous and toxic soil contamination prior to approving development applications.
  - **Policy ESPS-5.6:** Require that new development proposals are reviewed for legally required remediation by authorities with jurisdictional authority over groundwater and surface water contamination including but not limited to San Mateo County Environmental Health, State Water Quality Control Board and the Army Corps of Engineers, where waters of the United States are involved, and collaborate with authorities to ensure all relevant remediation requirements are met.
  - **Policy ESPS-5.11:** Encourage the use of green building practices to reduce potentially hazardous materials in construction materials.
  - **Action ESPS-5.5:** Prioritize remediation efforts and ensure all relevant remediation requirements are met by requiring new development proposals be reviewed for legally required mediation by

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San Mateo County Environmental Health, State Water Quality Control Board, and the Army Corp of Engineers.

Compliance with existing federal, State, and local regulations, including the General Plan goal, policies, and actions identified above, would ensure hazardous impacts during construction would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### Operation

The proposed project would allow for the development of a variety of land uses, including industrial, residential, commercial, office, civic, and open space uses. Industrial uses and some commercial uses utilize greater amounts of hazardous materials than other uses, such as residential uses and schools. Operation of future residential and some commercial uses 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 industrial and some types of commercial uses would involve use of larger amounts of hazardous materials, such as fuel/diesel, and commercial grade chemicals, solvents, cleaners, etc. These types of industrial and commercial uses, and therefore, the specific types of hazardous materials to be used, are not yet known.

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 USEPA, DTSC, Cal/OSHA, Caltrans, and RC-SCFD. Regulations that would apply to the 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 United State roadways; International Fire Code, 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. SCMC Title 13 also requires that individual business plans for any facility subject to the hazardous materials inventory response program include a program for compliance. Future development within the buildout horizon of the proposed project would be constructed and operated with strict adherence to all emergency response plan requirements set forth by CSMHSA and RC-SCFD.

Additionally, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to hazards and hazardous materials, including transport, use, and disposal. In addition to the General Plan goals, policies, and actions identified above, the following General Plan goal, policies, and action would serve to minimize potential adverse impacts related to the routine transport, use, or disposal of hazardous materials during operation:



## HAZARDOUS AND HAZARDOUS MATERIALS

- **Goal ESPS-5:** Protect the community from the harmful effects of hazardous materials.
  - **Policy ESPS-5.1:** Prohibit uses involving the manufacturing of hazardous materials throughout the city. Hazardous materials are defined in Chapter 6.95, Section 25501 0-1 of the Health and Safety Code. This policy applies only to the direct manufacture of hazardous substances. It does not apply to the storage or use of such materials in conjunction with permitted commercial and industrial uses.
  - **Policy ESPS-5.4:** Mitigate indoor air intrusion potential in areas of new development or redevelopment where the property is located above known volatile compound plumes.
  - **Policy ESPS-5.7:** Prohibit new non-residential uses that are known to release or emit toxic waste at levels that are harmful to human health while continuing to allow life science, research and development, medical, and other necessary services such as dry cleaners.
  - **Action ESPS-5.6:** Prepare regulations that address biosafety levels (BSL) for new life science, biotechnology, or other scientific developments to ensure a healthy and safe San Carlos community.

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 hazardous impacts during operation. Therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### Demolition

Future development projects within the buildout horizon of the proposed project may involve demolition of existing buildings and structures associated with a specific development site. Typical hazardous materials of concern for existing older structures in the EIR Study Area include asbestos, lead, mold, PCBs, and radon.

State agencies, in conjunction with the USEPA and OSHA, regulate removal, abatement, and transport procedures for asbestos-containing materials. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations; medical evaluation and monitoring are required for employees performing activities that could expose them to asbestos. The regulations include warnings and practices that must be followed to reduce the risk for asbestos emissions and exposure. Finally, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos. Requirements for limiting asbestos emissions from building demolition and renovation activities are specified in the BAAQMD Regulation 11, Rule 2 (Asbestos Demolition, Renovation and Manufacturing). California Government Code Sections 1529 and 1532.1 provide for exposure limits, exposure monitoring, respiratory protection and good working practice by workers exposed to lead and ACM.

Additionally, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to

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consider impacts to hazards and hazardous materials, including transport, use, and disposal. The General Plan goal, policies, and actions identified above would also serve to minimize potential adverse impacts related to the routine transport, use, or disposal of hazardous materials during demolition.

Therefore, with compliance with existing federal, State, and local regulations, including the General Plan goal, policies, and actions identified above, hazardous impacts during demolition would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### Pipelines

As noted in Section 4.8.1.2, *Existing Conditions*, four hazardous gas transmission pipelines are located in the EIR study area. Although there are hazardous pipelines throughout the EIR Study Area, all development would have to adhere to Title 8, Section 1541 of the CCR that regulate the new construction, excavation, and/or new utility lines within 10 feet or crossing existing high-pressure pipelines, natural gas/petroleum pipelines, or electrical lines greater than 60,000 volts. New construction, excavation, and/or utility lines will be designed and constructed in accordance with the CCR. Therefore, impacts associated with pipelines would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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HAZ-2	The proposed project would not 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.
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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.

For known or potential contaminated sites, prior to issuing a grading or building permit, the City would require an assessment of potential hazards and coordination with the Responsible Agency. Responsible Agency includes San Mateo County Environmental Health, Department of Toxic Substance Control (DTSC), State Water Resource Control Board and Environmental Protection Agency (EPA). If the Responsible Agency determines the development project could pose a human health or environmental risk, the City would require that such hazards be managed appropriately with oversight by the

## HAZARDOUS AND HAZARDOUS MATERIALS

Responsible Agency. Management techniques could include, but would not be limited to, actions such as removal of the contaminants (remediation), site controls to reduce exposure (e.g., capping soils, installation of soil vapor barriers), or administrative mechanisms (deed restrictions).

The City also has disaster preparedness training programs available and a Community Emergency Response Team training program which aims to prepare individuals, first responders, hazardous materials organizations more in-depth, crucial information about fire safety, light search and rescue, team organization, disaster medical operations, and more. In the case of an accidental release, the City also has an established Emergency Alert system titled “SMC ALERT” aimed to alert individuals of the San Mateo County communities of hazards in the area.

As described in impact discussion HAZ-1, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to hazards and hazardous materials, including accidental release. In addition to the General Plan goal, policies, and actions identified in impact discussion HAZ-1, the following General Plan goal, policies, and actions would serve to minimize potential adverse impacts related to release of hazardous materials:

- **Goal ESPS-5:** Protect the community from the harmful effects of hazardous materials.
  - **Policy ESPS-5.8:** Require the preparation of emergency response plans as part of use applications for all large generators and users of hazardous waste as required by federal law.
  - **Policy ESPS-5.9:** Actively promote public education, research, and information dissemination on hazards materials.
  - **Policy ESPS-5.10:** Expand community engagement on remediation. Engage community members in the remediation of toxic sites and the permitting and monitoring of potentially hazardous industrial uses.
  - **Action ESPS-5.1:** Provide on-going training for appropriate City personnel in hazardous materials, response, and handling.
  - **Action ESPS-5.2:** Disseminate information on proper disposal of household hazardous waste.
  - **Action ESPS-5.3:** Coordinate with waste disposal services and other government agencies to increase the convenience of proper disposal of household hazardous waste.
  - **Action ESPS-5.4:** Evaluate opportunities to participate in household hazardous waste collection services.

Compliance with federal, State, and local regulations, including the General Plan goal, policies, and actions, would ensure impacts related to release of hazardous materials would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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## HAZARDOUS AND HAZARDOUS MATERIALS

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HAZ-3	The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
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The EIR Study Area is currently served by two school districts, with a total of eleven K-12 schools (6 elementary schools, 2 middle schools, 1 charter school, and 2 high schools). All businesses within the EIR Study Area that handle and/or store a hazardous material equal to or greater than the minimum reportable quantities (i.e., 55 gallons for liquids, 500 pounds for solids and 200 cubic feet (at standard temperature and pressure) for compressed gases) must file a hazardous materials business plan with the CUPA. As described in impact discussions HAZ-1 and HAZ-2, while some future development within the buildout horizon of the proposed project could be reasonably expected to handle hazardous materials or generate hazardous emissions, the storage, use, and handling of these materials would be subject to existing federal, State, and local regulations.

As described in Chapter 4.2, *Air Quality*, of this Draft EIR, some land uses are considered more sensitive to airborne hazardous materials than others due to the types of population groups or activities involved. Because sensitive population groups include children, further CEQA evaluation of hazardous emissions or handling hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school, private or public would be required for future projects.

Compliance with existing plans requirements regarding ongoing environmental review and management of hazardous materials would ensure that future development within the buildout horizon of the proposed project would not result in a significant impact to adjacent land uses that may contain sensitive receptors. Therefore, the potential for emission of hazardous materials within 0.25 miles of a school during construction and operation of future development would be considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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HAZ-4	The proposed project would include land uses located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 but would not create a significant hazard to the public or the environment.
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As shown in Table 4.8-1, 35 hazardous materials sites are open or active hazardous waste sites in the EIR Study Area. These sites are undergoing remedial actions under the supervision of the RWQCB or DTSC. In the EIR Study Area, hazardous waste sites are also evaluated locally by the CSMHSA and San Mateo Hazardous Materials team.

Development on other sites in the EIR Study Area may result in hazardous materials impacts. 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, CCR Title 22, and related requirements would remedy all potential impacts caused by hazardous substance contamination. Additionally, as described in impact

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discussion HAZ-1, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to hazards and hazardous materials, including accidental release. The General Plan goal, policies, and actions identified in impact discussion HAZ-1 would also serve to minimize potential adverse impacts related to development on hazard materials sites.

Compliance with existing federal, State, and local regulations, as well as the General Plan goals, policies, and actions, would ensure that impacts related to development on hazardous materials sites would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>HAZ-5</b>	<b>The proposed project would not, for a project located within an airport land use plan, result in a safety hazard or excessive noise for people residing or working in the project area.</b>
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Airport safety hazards include hazards posed to aircraft as well as 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. 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. The FAA and Caltrans Division of Aeronautics provide guidance for land use safety near airports. With adherence to these guidelines, high concentrations of people are not exposed to potential airplane accidents along runways or near airports while airplanes are departing and arriving. There are also guidelines on the placement of housing, schools, and other sensitive land uses near airports because of the noise pollution caused by airplanes (see also Chapter 4.11, *Noise*, of this Draft EIR).

As stated in Section 4.8.1.2, *Existing Conditions*, the San Carlos Airport is located within the EIR Study Area. The proposed 2045 General Plan Reset would allow future development to occur on sites within 2 miles of a public airport, which could result in a safety hazard. However, future development within the AIA of the airport would be required to adhere to the regulations of the FAA and San Carlos Airport ALUCP. Developers or other parties that propose buildings or alterations to buildings greater than 200 feet in height (above grade), or structures within 10,000 linear feet of the airport that would penetrate a 50:1 plane sloping up and away from the airport runway, must complete and submit FAA Form 7460-1 to the FAA.<sup>11</sup>

As described in impact discussion HAZ-1, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to hazards and hazardous materials, including airport hazards. The following General Plan goal, policy, and action would serve to minimize risks associated with the San Carlos Airport:

- **Goal ESPS-6:** Minimize risks associated with operations at the San Carlos Airport.

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- **Policy ESPS-6.1:** Maintain land use and development in the vicinity of San Carlos Airport that are consistent with the relevant airport/land use compatibility criteria and guidelines contained in the adopted Airport/Land Use Compatibility Plan for the environs of San Carlos Airport, including noise, safety, height, and navigation easement requirements.
- **Action ESPS-6.1:** Submit proposed land use policy actions (general plans/amendments, specific plans/amendments, rezonings, etc.) and related development plans, if any, that affect property located within the Area B portion of the Airport Influence Area (AIA) boundary for San Carlos Airport, to the San Mateo County Airport Land Use Commission for review/action, pursuant to California Public Utilities Code Section 21676(b), prior to final action by the City.

Compliance with the requirements of the FAA and San Carlos Airport ALUCP and implementation of the General Plan goal, policy, and action identified above would ensure impacts from airport hazards would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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HAZ-6	The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
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Though no EOP can prevent all death and destruction, good plans carried out by knowledgeable and well-trained personnel will minimize losses. As indicated in SCMC Section 2.28.080, the City of San Carlos Disaster Council is responsible for the development of the City's emergency plan. San Carlos's EOP 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 SMC ALERT system.<sup>12</sup> During an emergency, CAL FIRE and RC-SCFD would provide emergency services in the EIR Study Area. Furthermore, the EIR Study Area is covered under the San Mateo County MJLHMP and EOP which provide strategies to address emergencies in the EIR Study Area.

Regional access to and from the EIR Study Area includes I-280 on the western end of the EIR Study Area, and SR-82 and HWY-101, which run parallel to each other at the northeastern end of the EIR Study Area. Several arterials in the EIR Study Area funnel traffic to larger arterials and freeways. Several major roadways and transit routes within and adjacent to the EIR Study Area are crossed by one or more disaster prone areas—including very high fire hazard severity zones, 100-year flood zones, liquefaction zones, landslide hazard 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.

The proposed 2045 General Plan Reset 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.

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<sup>12</sup> San Carlos, City of. Emergency Preparedness.  
[https://www.cityofsancarlos.org/community/emergency\\_preparedness.php](https://www.cityofsancarlos.org/community/emergency_preparedness.php), accessed October 25, 2024.

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Future development projects would be required not to 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.

San Carlos has also implemented Government Code Section 65302, which requires that the Safety Element of a general plan address evacuation routes. The Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset includes information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes, per SB 99. The ESPS Element also contains goals, policies, and actions that require local planning and development decisions to consider impacts to hazards and hazardous materials, including emergency response. In addition to the General Plan goal, policies, and actions identified in impact discussion HAZ-2 and impact discussion WILD-1 in Chapter 4.18, *Wildfire*, of this Draft EIR, the following General Plan goal, policy, and action would serve to minimize risks associated with emergency response and evacuation:

- **Goal ESPS-7:** Continue effective emergency response procedures to ensure public safety in the event of natural or man-made disasters.
  - **Policy ESPS-7.2:** Preserve a Basic Emergency Operation Plan consistent with the National Incident Management System (NIMS).
  - **Policy ESPS-7.3:** Maintain City Hall as the Emergency Operations Center (EOC) in San Carlos and provide for fully functional back up EOC for City staff.
  - **Policy ESPS-7.4:** Coordinate the preparation for natural and man-made disasters with the San Mateo County Office of Emergency Services, neighboring jurisdictions, and other governmental agencies.
  - **Policy ESPS-7.5:** Inform the public about disaster preparedness by providing information on supplies, training, evacuation routes, communication systems, and shelter locations.
  - **Policy ESPS-7.6:** Make available to the community, programs and resources relating to disaster preparedness.
  - **Policy ESPS-7.7:** Support the efforts of neighborhood and civic organizations to prepare for disasters if City resources are not available.
  - **Policy ESPS-7.8:** Identify and develop communication systems, evacuation methods, shelter locations and other services for special needs populations.
  - **Policy ESPS-7.9:** Evaluate safety service limitations on an annual basis to provide for adequate levels of service.
  - **Policy ESPS-7.10:** Identify potential emergency routes and suggest methods for operational needs for first responders.
  - **Policy ESPS-7.11:** Establish the capability to re-locate critical emergency response facilities such as fire, police, and essential services facilities, if needed, in areas that minimize their exposure to flooding, seismic effects, fire, or explosion.
  - **Policy ESPS-7.12:** Develop a procedure to quantify community emergency preparedness levels.

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- **Action ESPS-7.1:** Evaluate the Emergency Operation Plan on an annual basis and revise as needed to promote disaster preparedness.
- **Action ESPS-7.2:** Coordinate emergency response procedures with acute care medical facilities in San Mateo County to ensure adequate preparedness for hospital patients and staff.
- **Action ESPS-7.3:** Participate in regional disaster event simulations semi-annually by using the primary EOC and methods for implementing a back-up EOC.
- **Action ESPS-7.4:** Create a back-up EOC for City staff. Enter into a shared EOC agreement with a neighboring jurisdiction or County in the event City Hall is rendered inoperable as an EOC.
- **Action ESPS-7.5:** Participate in San Mateo County OES preparedness exercises and disaster simulations.
- **Action ESPS-7.6:** Encourage City employees through a volunteer program to obtain training in disaster preparedness and basic first aid skills.
- **Action ESPS-7.7:** Maintain and enhance the community disaster preparedness programs.
- **Action ESPS-7.8:** Identify the need for community awareness and education programs for residents. Develop programs to respond to identified needs.
- **Action ESPS-7.9:** Disseminate semi-annually, disaster preparedness information to residents through the city web site, newsletters, e-notify, newspaper articles, or other methods.
- **Action ESPS-7.10:** Make available multi-language disaster preparedness information.
- **Action ESPS-7.1:** Identify and program for emergency supplies through the EOC program in public parks.

Compliance with applicable regulations, emergency and evacuation plans, and the General Plan goals, policies, and actions identified above would reduce impacts to a *less-than-significant* level.

**Significance without Mitigation:** Less than significant.

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<b>HAZ-7</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative hazards and hazardous material impacts in the area.</b>
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The area considered for cumulative impacts is San Mateo County, which is the service area for the San Mateo County Environmental Health Division, the affected CUPA. Other development projects throughout the EIR Study Area would use, store, transport, and dispose of increased amounts of hazardous materials, and thus could pose substantial risks to the public and the environment. However, the use, storage, transport, and disposal of hazardous materials by other projects would conform with regulations of multiple agencies as described in Section 4.8.1.1, *Regulatory Framework*. Future development within the San Carlos Airport ALUCP boundaries would be required to adhere to the regulations of the ALCUP, as well as the FAA. Cumulative projects also have the potential to interfere with an adopted emergency response plan or emergency evacuation plan; however, all development



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would be required to comply with the provisions of the local, State, and federal regulations for emergency response plans and emergency evacuation plans. Compliance with existing federal, State, and local regulations would reduce potential cumulative impacts related to hazards and hazardous materials and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## HAZARDOUS AND HAZARDOUS MATERIALS

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## HYDROLOGY AND WATER QUALITY

### 4.9 HYDROLOGY AND WATER QUALITY

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to hydrology and water quality, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.9.1 ENVIRONMENTAL SETTING

##### 4.9.1.1 REGULATORY FRAMEWORK

###### Federal Regulations

###### *Clean Water Act*

The United States Environmental Protection Agency (USEPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) (codified at 33 United States Code Sections 1251 to 1376) of 1972 is the primary federal law that governs and authorizes water quality control activities by the EPA, as well as the states. Various elements of the CWA, which address water quality, are discussed below.

Permits to dredge or fill waters of the United States are administered by the United States Army Corps of Engineers (USACE) under Section 404 of the CWA. “Waters of the United States” are defined as territorial seas and traditional navigable waters, perennial and intermittent tributaries to those waters, lakes and ponds and impoundments of jurisdictional waters, and wetlands adjacent to jurisdictional waters. The regulatory branch of the USACE is responsible for implementing and enforcing Section 404 of the CWA and issuing permits. Any activity that discharges fill material and/or requires excavation in waters of the United States must obtain a Section 404 permit. Before issuing the permit, the USACE requires that an analysis be conducted to demonstrate that the proposed project is the least environmentally damaging practicable alternative. Also, the USACE is required to comply with the National Environmental Policy Act before it may issue an individual Section 404 permit.

Under Section 401 of the CWA, every applicant for a Section 404 permit that may result in a discharge to a water body must first obtain State Water Quality Certification that the proposed activity will comply with State water quality standards. Certifications are issued in conjunction with USACE Section 404 permits for dredge and fill discharges. In addition, an application for Individual Water Quality Certification and/or Waste Discharge Requirements must be submitted for any activity that would result in the placement of dredged or fill material in waters of the State that are not jurisdictional to the USACE, such as isolated wetlands, to ensure that the proposed activity complies with State water quality standards. In California, the authority to either grant water quality certification or waive the requirement

## HYDROLOGY AND WATER QUALITY

is delegated by the State Water Resources Control Board (SWRCB) to its nine Regional Water Quality Control Boards (RWQCB).

Under federal law, the USEPA has published water quality regulations under Volume 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2) criteria that protect the designated uses. Section 304(a) requires the USEPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. In California, the USEPA has delegated authority to the SWRCB and its RWQCBs to identify beneficial uses and adopt applicable water quality objectives.

When water quality does not meet CWA standards and compromises designated beneficial uses of a receiving water body, Section 303(d) of the CWA requires that water body be identified and listed as “impaired”. Once a water body has been designated as impaired, a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body may receive without exceeding applicable water quality standards, with a factor of safety included. Once established, the TMDL allocates the loads among current and future pollutant sources to the water body.

### *National Pollutant Discharge Elimination System*

The National Pollutant Discharge Elimination System (NPDES) permit program was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems (MS4). Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Under the NPDES Program, all facilities that discharge pollutants into waters of the United States are required to obtain a NPDES permit. Requirements for stormwater discharges are also regulated under this program. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs.

Under Provision C.3 of the MS4 Permit, the permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows. This goal is accomplished primarily through the implementation of low impact development techniques. In addition, projects that create and/or replace one acre or more of impervious surfaces must comply with the hydromodification requirements specified in the C.3.g provisions of the MS4 permit. These requirements include implementing stormwater control measures

## HYDROLOGY AND WATER QUALITY

such that post-project runoff must match pre-project runoff from 10 percent of the pre-project 2-year flow rate up to the pre-project 10-year peak flow.

### *Federal Emergency Management Agency*

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA's minimum level of flood protection for new development is the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year.

As required by the FEMA regulations, all development constructed within the Special Flood Hazard Zone (as delineated on the FIRM) must be elevated so that the lowest floor is at or above the base flood elevation level. The term "development" is defined by FEMA as any human-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials. Per these regulations, if development in these areas occurs, a hydrologic and hydraulic analysis must be performed prior to the start of development and must demonstrate that the development does not cause any rise in base flood elevation levels, because no rise is permitted within regulatory floodways. Upon completion of any development that changes existing Special Flood Hazard Area boundaries, the National Flood Insurance Program directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision, as soon as practicable, but not later than six months after such data becomes available.

### *Rivers and Harbors Act of 1899*

Under the Rivers and Harbors Act of 1899, the USACE requires permits for activities involving the obstruction of the navigable capacity of any waters of the United States or the construction of any structures in or over navigable waters of the United States, including ports, canals, navigable rivers, or other waters. "Navigable waters" under Section 10 of the Rivers and Harbors Act are defined as "those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high water mark and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce." Pursuant to Section 10 of the Rivers and Harbors Act, the USACE administers this regulatory program separate from the Section 404 program. A Section 10 permit may be required for structures or work outside the limits of navigable waters if the structure or work affects the course, location, condition, or capacity of the water body.

### *Fish and Wildlife Coordination Act*

The Fish and Wildlife Coordination Act provides the basic authority for the United States Fish and Wildlife Service (USFWS) to evaluate impacts to fish and wildlife from proposed water resource development projects. This act requires that all federal agencies consult with the USFWS, the National Marine Fisheries Service, and State wildlife agencies (i.e., the California Department of Fish and Wildlife

## HYDROLOGY AND WATER QUALITY

or CDFW) for activities that affect, control, or modify waters of any stream or bodies of water. Under this act, the USFWS has responsibility for reviewing and commenting on all water resources projects. For example, it would provide consultation to the USACE prior to issuance of a Section 404 permit.

If a project may result in the “incidental take” of a listed species, an incidental take permit is required. An incidental take permit allows a developer to proceed with an activity that is legal in all other respects but that results in the “incidental taking” of a listed species. A habitat conservation plan must also accompany an application for an incidental take permit. The purpose of a habitat conservation plan is to ensure that the effects of the permitted action on listed species are adequately minimized and mitigated.

### State Regulations

#### *Porter-Cologne Water Quality Control Act*

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water quality control law for California. This act established the SWRCB and divided the state into nine regional basins, each under the jurisdiction of an RWQCB. The SWRCB is the primary State agency responsible for the protection of California’s water quality and groundwater supplies. The RWQCBs carry 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 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 San Carlos is within the jurisdiction of the San Francisco Bay RWQCB (Region 2), which regulates surface water and groundwater quality in the watershed that encompasses the following counties: Alameda, Contra Costa, San Francisco, Santa Clara (north of Morgan Hill), San Mateo, Marin, Sonoma, Napa and Solano.

The Porter-Cologne Act also authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, or other approvals. Other State agencies with jurisdiction over water quality regulation in California include the California Department of Health Services for drinking water regulations, the CDFW, and the Office of Environmental Health and Hazard Assessment.

#### *State Water Resources Control Board*

In California, the SWRCB has broad authority over water quality control issues for the State. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the federal government under the CWA. It also regulates public drinking water systems, NPDES wastewater discharges, water quality monitoring, water recycling programs, landfill disposal, water rights, and implements drought restrictions.

#### SWRCB General Construction Permit

Construction activities that disturb one or more acres of land that could impact hydrologic resources must comply with the requirements of the newly reissued SWRCB Construction General Permit (Order WQ 2022-0057-DWQ). Under the terms of the permit, applicants must file Permit Registration Documents (PRD) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent,

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risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS) website.

Applicants must also demonstrate conformance with applicable best management practices (BMPs) and prepare a SWPPP containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a visual monitoring program, a sampling program to ensure compliance with water quality standards, and on-site collection of samples and inspection of BMPs during a qualifying precipitation event.

In addition, the City has the authority to require submittal of an interim and final Erosion and Sediment Control Plan (ESCP), if required by the City Engineer or Building Official. The ESCP must describe erosion and sediment control measures that will be implemented during the construction phase as well as final stabilization control measures as well as the calculation of maximum surface runoff amounts and sediment yield. This requirement may apply to projects that are less than one acre in size if they require grading permits or building permits that could result in non-stormwater discharges to a storm drain. Projects subject to the SWRCB Construction General Permit may include the ESCP provisions within the SWPPP.

### SWRCB Board General Industrial Permit

The Statewide General permit for Storm Water Discharges Associated with Industrial Activities, Order No. 2014-0057-DWQ and amended by 2015-0122-DWQ (2018) implements the federally required storm water regulations in California for storm water associated with industrial activities that discharge to waters of the United States. This regulation covers facilities that are required by federal regulations or by the RWQCBs to obtain an NPDES permit. Dischargers are required to eliminate non-storm water discharges, develop SWPPPs that include BMPs, conduct monitoring of stormwater runoff, and submit all compliance documents via the SWRCB's SMARTS program.

### SWRCB Trash Amendments

On April 7, 2015, the SWRCB adopted an amendment to the Water Quality Control Plan for Ocean Waters of California to control trash and Part 1, Trash Provisions, of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California. They are collectively referred to as "the Trash Amendments." The Trash Amendments apply to all surface waters of California and include a land-use-based compliance approach to focus trash controls on areas with high trash-generation rates. Areas such as high density residential, industrial, commercial, mixed urban, and public transportation stations are considered priority land uses. There are two compliance tracks for Phase I and Phase II MS4 permittees:

- Track 1: Permittees must install, operate, and maintain a network of certified full capture systems in storm drains that capture runoff from priority land uses.

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- Track 2: Permittees must implement a plan with a combination of full capture systems, multibenefit projects, institutional controls, and/or other treatment methods that have the same effectiveness as Track 1 methods.

The Trash Amendments provide a framework for permittees to implement their provisions. Full compliance must occur within 10 years of the permit, and permittees must also meet interim milestones such as average load reductions of 10 percent per year. The amendment mandates that the City needs to install catch basin filters on all City catch basins by December 2, 2030.<sup>1</sup>

### *California Water Code Section 13751: Water Wells*

Section 13751 of the Water Code requires a Well Completion Report (WCR) to be completed by each person who digs, bores, or drills a water well, cathodic protection well, groundwater monitoring well, or geothermal heat exchange well or abandons or modifies an existing well. The WCR should be filed with the California Department of Water Resources (DWR) within 60 days of the date that construction, alteration, or destruction of a well is completed.<sup>2</sup> Completed WCRs are sent to and maintained at the DWR regional office that serves the area where the well is located.

### *California Coastal Act of 1976*

The California Coastal Act of 1976 established three designated coastal management agencies to plan and regulate the use of land and water in the coastal zone: the California Coastal Commission, the San Francisco Bay Conservation and Development Commission (BCDC), and the California Coastal Conservancy. Under California's federally approved Coastal Management Program, the California Coastal Commission manages development along the California coast except for San Francisco Bay, which is overseen by the BCDC. The City of San Carlos is under the jurisdiction of the BCDC for all land within 100 feet of the shoreline. The mission of the California Coastal Conservancy is to purchase, protect, restore, and enhance coastal resources and provide shoreline access. Additional information on the BCDC is discussed under Regional Regulations, below.

### *California Department of Fish and Wildlife*

The CDFW protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Sections 1601 to 1606 of the California Fish and Game Code. The Fish and Game Code stipulates that it is "unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake" without notifying the CDFW, incorporating necessary mitigation, and obtaining a streambed alteration agreement. CDFW's jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation.

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<sup>1</sup> State Water Resources Quality Control Board, September 2022, Storm Water Program - Trash Implementation Program. [https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/trash\\_implementation.html](https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html), accessed April 4, 2023.

<sup>2</sup> California Department of Water Resources, 2024, Well Completion Reports, <https://water.ca.gov/Programs/Groundwater-Management/Wells/Well-Completion-Reports>, accessed October 11, 2024.



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### *Water Conservation in Landscaping Act of 2006*

The Water Conservation in Landscaping Act includes the State of California’s Model Water Efficient Landscape Ordinance (MWELO), which requires cities and counties to adopt landscape water conservation ordinances. The MWELO was revised in July 2015 via Executive Order B-29-15 to address the ongoing drought and build resiliency for future droughts. State law requires all land use agencies, which includes cities and counties, to adopt a WELO that is at least as efficient as the MWELO prepared by the DWR. The 2015 revisions to the MWELO improve water conservation in the landscaping sector by promoting efficient landscapes in new developments and retrofitted landscapes. The revisions increase water efficiency by requiring more efficient irrigation systems, incentives for grey water usage, improvements in on-site stormwater capture, and limiting the portion of landscapes that can be covered in high-water-use plants and turf. New development projects that include landscape areas of 500 square feet or more are subject to the MWELO. This applies to residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review. The previous landscape size threshold for new development projects was 2,500 square feet.<sup>3</sup> The size threshold for rehabilitated landscapes has not changed and remains at 2,500 square feet.

## Regional Regulations

### *San Francisco Bay Regional Water Quality Control Board*

The San Francisco Bay RWQCB (Region 2) addresses regionwide water quality issues through the creation and triennial update of the *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan). The Basin Plan was adopted in 1995 and most recently updated to reflect the Basin Plan amendments adopted by the State Board up through April 17, 2024.<sup>4</sup> This Basin Plan designates beneficial uses of the State waters within Region 2, 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. The *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*, as adopted by the SWRCB in 1995 and last amended in 2018, also provides water quality principles and guidelines to prevent water quality degradation and protect the beneficial uses of waters of enclosed bays and estuaries.<sup>5</sup> The San Francisco Bay RWQCB also administers the MS4 permit for San Mateo County and the municipalities within San Mateo County, including the City of San Carlos.

### *San Francisco Bay Conservation and Development Commission*

The California Coastal Act carries out its mandate locally through the BCDC. BCDC fulfills this mission through the implementation of the *San Francisco Bay Plan* (Bay Plan), an enforceable plan that guides

<sup>3</sup> County of San Mateo, 2024, Water Efficient Landscape Ordinance, <https://www.smcgov.org/planning/water-efficient-landscape-ordinance-welo>, accessed October 11, 2024.

<sup>4</sup> California Regional Water Quality Control Board, Basin Planning, 2024, [https://www.waterboards.ca.gov/sanfranciscobay/basin\\_planning.html#basinplan](https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html#basinplan), accessed October 11, 2024.

<sup>5</sup> State Water Resources Control Board, 1995, Water Quality Control Policy for the Enclosed Bays and Estuaries of California, as Adopted by Resolution No. 95-84 on November 16, 1995, [https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/1995/rs1995\\_0084.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/1995/rs1995_0084.pdf), accessed October 11, 2024.

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the future protection and use of San Francisco Bay and its shoreline.<sup>6</sup> The Bay Plan includes a range of policies on public access, water quality, project design, and dredging and fill. The Bay Plan also designates shoreline areas that should be reserved for water-related sports, industry, and public recreation; airports; and wildlife areas. The City of San Carlos is within BCDC's jurisdiction. Impacts related to aesthetics, biological resources, and recreation are discussed in Chapter 4.1, *Aesthetics*, Chapter 4.3, *Biological Resources*, and Chapter 4.12, *Parks and Recreation*, of this Draft EIR, respectively.

The current BCDC policy allows for the protection of existing and planned development from flooding by the placement of fill, encourages innovative means of dealing with flood danger, and states that local governments will determine how best to deal with development projects inland of BCDC's jurisdiction, which extends 100 feet inland from the shoreline. The provisions of BCDC's Bay Plan do not apply outside BCDC's jurisdiction for purposes of implementing the California Environmental Quality Act (CEQA).<sup>7</sup>

The new BCDC policies require sea level rise risk assessments to be conducted when planning shoreline areas or designing large shoreline projects within BCDC's jurisdiction. Risk assessments are not required for repairs of existing facilities, interim projects, small projects that do not increase risks to public safety, and infill projects within existing urbanized areas. Projects within the shoreline band, the area within 100 feet of the shoreline, need only address risks to public access.

As a permitting authority along the San Francisco Bay shoreline, BCDC is responsible for granting or denying permits for any proposed fill, extraction of materials, or change in the use of any water, land, or structure within BCDC's jurisdiction. Permits may be granted or denied only after public hearings and after the process for review and comment has been completed by the City. BCDC will approve the permit if it is determined that the project is in accordance with defined standards for use of the shoreline, provisions for public access, and advisory review of appearance.

Projects within BCDC jurisdiction that involve bay fill must be consistent with the policies of the BCDC's *Bay Plan* on the safety of fills and shoreline protection. Land elevation changes caused by tectonic activity or consolidation/compaction of soft soils, such as bay muds, is variable around the San Francisco Bay. Consequently, some parts of the San Francisco Bay may experience a greater relative rise in sea level than other areas. According to BCDC policies, new projects built on fill or near the shoreline should be set back from the edge of the shore so that the project will not be subject to dynamic wave energy; be built so the bottom floor of structures will be above a 100-year flood elevation that takes future sea level rise into account for the expected life of the project; be specifically designed to tolerate periodic flooding; or employ other effective means of addressing the impacts of future sea level rise and storm activity.

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<sup>6</sup> San Francisco Bay Conservation and Development Commission, 2020, *San Francisco Bay Plan*, <https://bcdc.ca.gov/resources/plans/san-francisco-bay-plan/>, accessed September 24, 2024.

<sup>7</sup> San Francisco Bay Conservation and Development Commission, 2021, *San Francisco Bay Plan Climate Change Policy Guidance* <https://bcdc.ca.gov/wp-content/uploads/sites/354/2023/09/San-Francisco-Bay-Plan-Climate-Change-Policy-Guidance.pdf>, accessed October 11, 2024.

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### *Municipal Regional Stormwater NPDES Permit*

Municipal stormwater discharge in the City of San Carlos is subject to the Waste Discharge Requirements (WDRs) of the MS4 Permit (Order No. R2-2022-0018 and NPDES Permit No. CAS612008). Provision C.3 of the MRP requirements applies to all new development or redevelopment projects that create or replace 5,000 square feet of impervious surfaces. Provision C.3 of the MS4 Permit also mandates that new development and redevelopment projects must: (1) incorporate site design, source control, and stormwater treatment on-site; (2) minimize the discharge of pollutants in stormwater runoff and non-stormwater discharge; and (3) minimize the rate and volume of stormwater runoff under post-development conditions. Low-impact development (LID) methods are the primary mechanisms for implementing such controls.

New development projects must design and construct stormwater treatment systems that capture a percentage of the flow rate or volume from a specified storm event based on the sizing criteria described in the C.3 provisions of the MRP. The treatment systems use LID measures that include rainwater harvesting and reuse, infiltration, evapotranspiration, and biotreatment/bioretenion.

In order to comply with Provision C.3 of the MS4 Permit, regulated projects would be required to submit a Stormwater Control Plan (SCP) and C.3 and C.6 Development Review Checklist with building plans, to be reviewed and approved by the City of San Carlos. The SCP must be prepared under the direction of and certified by a licensed and qualified professional, which includes civil engineers, architects, or landscape architects.

### *San Mateo Countywide Water Pollution Prevention Program*

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) is a partnership of the City/County Association of Governments (C/CAG), the County of San Mateo, and 20 incorporated cities within the county, which share a common NPDES permit. This partnership also relies on each of the municipalities to implement local stormwater pollution prevention and control activities for its own local storm drain systems. The SMCWPPP's Stormwater Resource Plan (SRP) outlines priorities, key elements, strategies, and evaluation methods to implement the SMCWPPP. The comprehensive program includes pollution reduction activities for construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations. The SRP also includes a public education effort, target pollutant reduction strategies, and watershed assessment and monitoring. The SRP, in conjunction with the NPDES permit adopted by the Water Board, is designed to enable SMCWPPP to meet the requirements of the CWA.

Post-construction stormwater quality requirements pursuant to the SMCWPPP are described in the C.3 Regulated Projects Guide (Version 1.0) issued in January 2020.<sup>8</sup> The C.3 Regulated Projects Guide includes instructions for implementing site design measures, source controls, stormwater treatment measures, construction site controls, and low-impact development measures.

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<sup>8</sup> San Mateo Countywide Water Pollution Prevention Program, January 2020, *C.3 Regulated Projects Guide*, [https://www.flowstobay.org/wp-content/uploads/2020/03/SMCWPPP-C.3-Regulated-Project-Guide-High-Res\\_021220\\_0.pdf](https://www.flowstobay.org/wp-content/uploads/2020/03/SMCWPPP-C.3-Regulated-Project-Guide-High-Res_021220_0.pdf), accessed October 11, 2024.

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### *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan*

The purpose of hazard mitigation planning is to reduce the loss of life and property by minimizing the impact of disasters. The *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan* (MJHMP), updated in 2021 in accordance with the federal Disaster Mitigation Action of 2000 (DMA 2000), provides an assessment of natural hazards in the county and a set of short-term mitigation actions to reduce or eliminate the long-term risk to people and property from these hazards. The San Carlos Jurisdictional Annex of the MJHMP provides an assessment of hazards and vulnerabilities, and a set of mitigation actions for San Carlos specifically while considering the results from the countywide effort. In the context of an MJHMP, mitigation is an action that reduces or eliminates long-term risk to people and property from hazards, including flooding, sea level rise, and dam failure. Mitigation actions related to flood, sea level rise, and dam failure in the San Carlos Jurisdictional Annex of the MJHMP include participating in the plan maintenance protocols, implement floodplain management programs, and developing a Continuity of Operations Plan.<sup>9</sup>

The MJHMP must be reviewed and approved by the Federal Emergency Management Agency (FEMA) every five years to maintain eligibility for disaster relief funding. As part of this process, the California Governor's Office of Emergency Services reviews all local hazard mitigation plans in accordance with DMA 2000 regulations and coordinates with local jurisdictions to ensure compliance with FEMA's Local Mitigation Plan Review Guide. As part of the proposed project, the MJHMP is adopted in its entirety into the proposed Safety Element by reference.

### *San Mateo County Storm Water Resources Plan*

The San Mateo County Stormwater Resource Plan (SRP) is a comprehensive document that addresses specific stormwater runoff issues in the county with a watershed-based approach. The main goals of the SRP are to identify and prioritize opportunities to better utilize stormwater as a resource in San Mateo County through a detailed analysis of watershed processes, surface and groundwater resources, input from stakeholders and the public, and analysis of multiple benefits that can be achieved through strategically planned stormwater management projects.<sup>10</sup> These projects aim to capture and manage stormwater more sustainably, reduce flooding and pollution associated with runoff, improve biological functioning of plants, soils, and other natural infrastructure, and provide many community benefits, including cleaner air and water and enhanced aesthetic value of local streets and neighborhoods. Senate Bill 985 (Pavley, 2014) requires SRPs to be developed to be eligible for funding from future State bond measures for stormwater and dry weather capture projects.<sup>11</sup>

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<sup>9</sup> County of San Mateo, 2021, 2021 Multijurisdictional Local Hazard Mitigation Plan – Volume 2, <https://www.smcgov.org/media/53476/download?inline=>, accessed on October 11, 2024.

<sup>10</sup> City/County Association of Governments of San Mateo, February 2017, *Stormwater Resource Plan for San Mateo County*, <https://ccag.ca.gov/wp-content/uploads/2017/02/SMC-SRP-Report-FINAL-1.pdf>, accessed October 11, 2024.

<sup>11</sup> City/County Association of Governments of San Mateo, 2024, *San Mateo Storm Water Resources Plan*, <https://ccag.ca.gov/srp/>, accessed October 11, 2024.

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### *San Mateo County Flood & Sea Level Rise Resiliency District (OneShoreline)*

In April 2018, the C/CAG Countywide Water Coordination Committee proposed the formation of a countywide agency to address sea level rise, flooding, coastal erosion, and regional stormwater infrastructure. Assembly Bill 825 was signed into law in September 2019 and, on January 1, 2020, the San Mateo County Flood and Sea Level Rise Resiliency District, more commonly known as OneShoreline, was formed.

With startup funding from San Mateo County and 20 incorporated cities, OneShoreline has initiated several projects to protect against the impact of sea level rise. In terms of financial losses due to climate change, San Mateo County is the most vulnerable county in California. By 2100, it is estimated that over 40 percent of the land could be affected.<sup>12</sup> OneShoreline is working with several cities within San Mateo County to update their General Plans, Specific Plans, and zoning ordinances to address future conditions brought on by climate change. They also are preparing a Planning Guidance Policy that can be used by cities and San Mateo County to account for climate-driven flooding, stormwater capture, groundwater rise, and sea level rise in planning documents, processes, and approvals.

## Local Regulations

### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.9.3, *Impact Discussion*.

### *City of San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to hydrology and water quality:

- Chapter 8.60, *Mandatory Organic Waste Disposal Reduction*, adopts the requirements of the MWELO.
- Chapter 12.08, *Grading and Excavation*, requires a grading permit to be submitted and approved by the City prior to the start of construction activities and must include an interim and final erosion and sediment control plan. In addition, no grading shall be conducted in such a manner as to alter the established gradient of natural drainage channels in a manner to cause excessive erosion or flooding.
- Chapter 13.14, *Stormwater Management and Discharge Control*, prohibits the discharge of non-stormwater discharges to the City storm drain system. All projects that will or may result in pollutants entering the City storm drain system must comply with Section 13.14.110 to reduce such

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<sup>12</sup> San Mateo County, 2024, OneShoreline, <https://oneshoreline.org/frequently-asked-questions/> accessed October 15, 2024.

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pollutants, including standards for parking lots and similar structures, and BMPs for new development and redevelopment projects. In addition, this chapter provides for watercourse protection to ensure that all watercourses are kept and maintained reasonably free from pollutants and flow restrictions and for the maintenance of healthy bank vegetation.

- Chapter 15.56, *Flood Damage Prevention*, promotes public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas. Nonresidential construction shall either be elevated to or above the base flood elevation or be floodproofed so that the below the base flood level the structure is watertight with walls substantially impermeable to the passage of water or have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- Chapter 17.16.270, *Storm Drainage Facilities*, requires the subdivider to dedicate rights-of-way for storm drainage purposes that conform to the boundary lines of any natural watercourse, channel, stream, or creek that traverses the subdivision.
- Chapter 18.18.080, *Water Efficient Landscaping*, establishes water-efficient landscape and irrigation guidelines to promote the conservation and efficient use of water and minimize runoff with the use of automatic control systems.

### *City of San Carlos Citywide Storm Drain System Master Plan*

The City of San Carlos prepared a Citywide Storm Drain System Master Plan (SDMP) in April 2017.<sup>13</sup> The SDMP describes the City's stormwater and drainage system and identified causes of flooding within the system to assist in development systemwide improvements. Hydraulic modeling of the citywide drainage system was conducted, and the results were used to develop alternative improvement projects to improve system capacity. These alternatives were ranked to develop a prioritized Capital Improvement Program (CIP) that addresses capacity issues and seeks to prioritize the more severe flooding problems.

### *City of San Carlos Green Infrastructure Plan*

Adopted in 2019, the Green Infrastructure Plan describes how the City will, over time, transition its existing "gray" (i.e., traditional) infrastructure to "green" infrastructure. This document also provides guidance to meet stormwater pollutant load reduction goals and creates a process for prioritizing the integration of Green Infrastructure (GI) into CIP projects. Green infrastructure uses vegetation, soil, and other elements to capture, treat, infiltrate and slow urban runoff. GI measures could include stormwater planters, rain garden, tree wells, pervious pavement, infiltration systems, and green roofs.<sup>14</sup>

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<sup>13</sup> City of San Carlos, 2017, Citywide Storm Drain System Master Plan, dated April 2017.

<sup>14</sup> City of San Carlos, 2019, Green Infrastructure Plan, <https://cms3.revize.com/revize/sancarlos/SanCarlos-GI-Plan-FINAL06-2019-Rev2.pdf>, accessed on October 11, 2024.

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### 4.9.1.2 EXISTING CONDITIONS

#### Topography and Climate

The EIR Study Area extends from about 800 feet above sea level in the southwestern hills to sea level on the northeastern edge of the City adjacent to San Francisco Bay. Most of the City is hilly, with flatter areas to the northeast with elevations ranging from 40 feet above sea level or less.

San Carlos has a Mediterranean-type climate, characterized by dry relatively cool summers and wet mild winters. The area receives an average annual rainfall of approximately 17.7 inches per year, with the rainy period occurring for 7.3 months October and May.<sup>15</sup> Due to two gaps in the Santa Cruz Mountains to the west, weather from the Pacific Ocean can result in gusty afternoon winds and fog in the late afternoon through early morning in the summer.

#### Regional Hydrology

San Carlos is located within the San Francisco Bay watershed, which is further divided into sub-watersheds. The EIR Study Area is located within five watersheds, as shown in Figure 4.9-1, *San Carlos Watersheds*. The five watersheds include Cordilleras Creek, Brittan Creek, Pulgas Creek, Lower Pulgas Creek and Belmont Creek.<sup>16</sup>

Pulgas and Brittan Creeks are the two main creeks that are entirely within the City of San Carlos. The lengths of these creeks are mostly unhardened channels, with hardened channels in the upper reaches and the lower flatlands in eastern San Carlos, where Brittan Creek joins Pulgas Creek via an underground conduit (paralleling El Camino Real). Following the confluence of Pulgas Creek and Brittan Creeks, the combined flow drains into the Smith Slough, south of Bair Island. The Brittan Creek, Pulgas, and Lower Pulgas Watersheds encompass approximately 824 acres, 1,083 acres, and 295 acres, respectively.<sup>17</sup>

Cordilleras Creek, the longest of the four creeks, is mostly outside the city limit, defining San Carlos' south-southeast border shared with the City of Redwood City. Cordilleras Creek, like the combined Pulgas/Brittan Creek, also flows into San Francisco Bay via Smith Slough. The upper reaches of the creeks are generally natural. Also, considerable portions of the creeks' lower reaches, mainly in east San Carlos, have been channelized for conveyance of varying flow capacities. The Cordilleras Creek Watershed encompasses approximately 2,230 acres.<sup>18</sup>

Belmont Creek Watershed is approximately 511 acres and is shared with the City of Belmont to the north. Belmont Creek traverses east through San Carlos, and then flows northward east of Highway 101 and flows into the West Redwood Shores outfall and to Belmont Slough and O'Neill Slough.<sup>19</sup>

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<sup>15</sup> Weather Spark, 2024, Climate and Average Weather Year Round in San Carlos, [https://weatherspark.com/y/556/Average-Weather-in-San-Carlos-California-United-States-Year-Round#google\\_vignette](https://weatherspark.com/y/556/Average-Weather-in-San-Carlos-California-United-States-Year-Round#google_vignette), accessed on October 11, 2024.

<sup>16</sup> City of San Carlos, 2017, Citywide Storm Drain System Master Plan, dated April 2017.

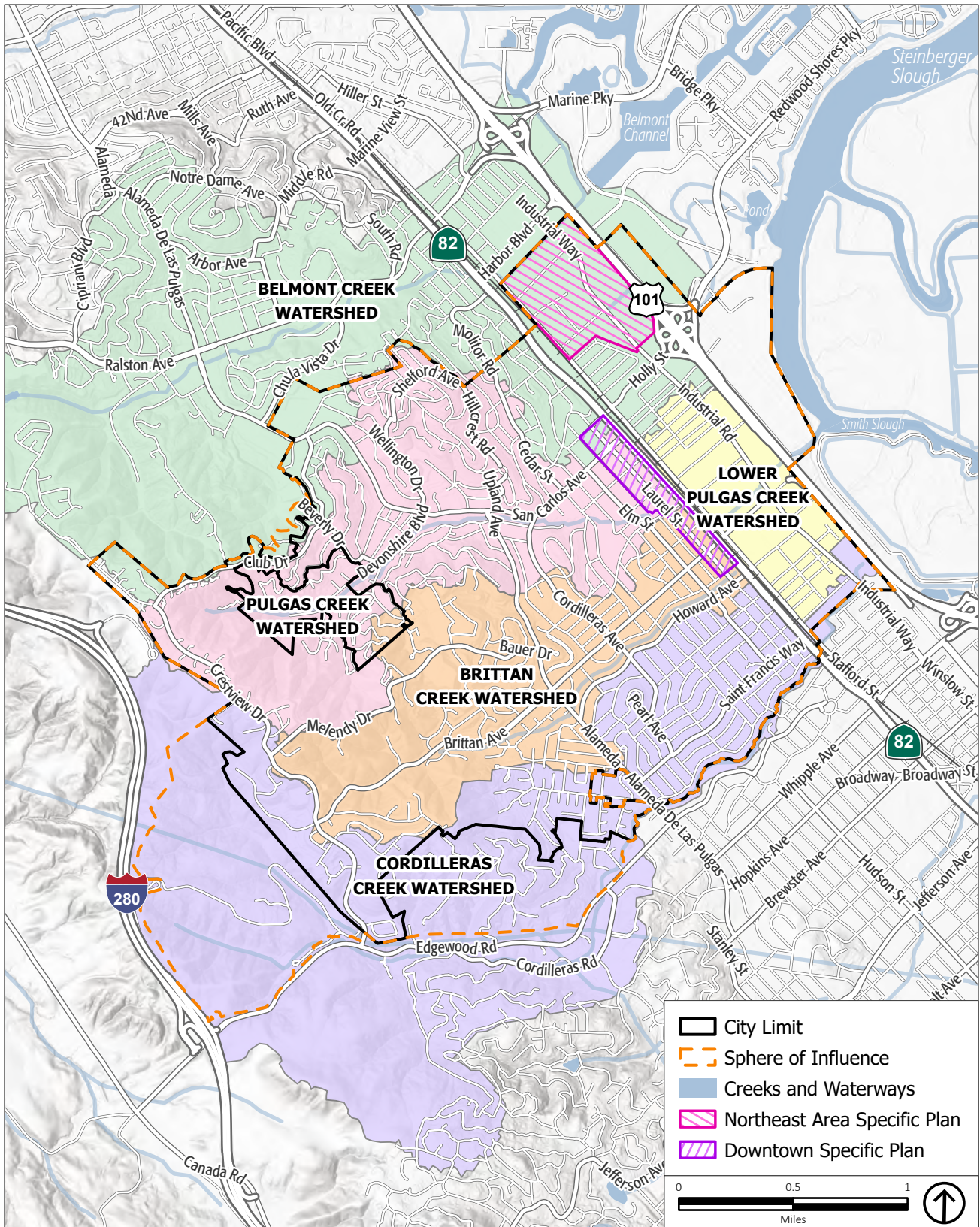
<sup>17</sup> City of San Carlos, 2017, Citywide Storm Drain System Master Plan, dated April 2017.

<sup>18</sup> City of San Carlos, 2017, Citywide Storm Drain System Master Plan, dated April 2017.

<sup>19</sup> City of San Carlos, 2017, Citywide Storm Drain System Master Plan, dated April 2017.



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Source: GHD, 2016; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.9-1  
San Carlos Watersheds



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### Storm Drainage System

Stormwater runoff in the City of San Carlos is conveyed to San Francisco Bay via a network of 56 miles of storm drains, creeks and drainage channels, and three pump stations.<sup>20</sup> The drainage pipes range in size between 4-inch to 72-inch diameter. San Carlos is responsible for maintenance of culverts under roadways and creek segments with easements. Inaccessible creek areas and upstream reaches in the hills are generally on private property and respective property owners are responsible for maintenance. The City addresses flooding constraints through their CIP, which prioritizes improvement projects for the drainage system.

### Groundwater

Most of the City of San Carlos is within the San Mateo Plain Subbasin of the Santa Clara Valley Groundwater Basin.<sup>21</sup> However, groundwater is not used for municipal water supply in San Carlos.<sup>22</sup> The southwestern portion of the City in the hills is not within a designated groundwater basin. The San Mateo Plain Subbasin is designated as a very low priority basin and therefore is not regulated under the Sustainable Groundwater Management Act. This is because there is very little groundwater use in this basin (less than 2,700 acre-feet/year) and it is mostly due to private well pumping in the subbasin areas south of the City Limits (Redwood City and Menlo Park).

The EIR Study Area is served primarily by three water providers: California Water Service Mid-Peninsula District (Cal Water-MPS), Mid-Peninsula Water District (MPWD) and the City of Redwood City. Cal Water-MPS provides water service for most of the EIR Study Area, while MPWD provides water to a small northern portion of the City between El Camino Real and Highway 101. There is one small area within the EIR Study Area northwest of the intersection of Edgewood Road and Alameda de las Pulgas that is provided with potable water by the City of Redwood City. However, this area does not use groundwater and are already developed with residential properties. Cal Water-MPS and MPWD supplies the City with water purchased from the San Francisco Public Utilities Commission (SFPUC). The SFPUC's water supplies consist of surface water imported from the Sierra Nevada via the Hetch Hetchy Project and local surface water from the San Francisco Bay Region.

Shallow groundwater is typically encountered in San Carlos at depths ranging from 4 to 8 feet below ground surface (bgs).<sup>23</sup> If construction dewatering is required with future development within the EIR Study Area, an application for a groundwater waste discharge permit must be completed and submitted to the City for review and approval. Required information includes the source and estimated discharge volume, proposed discharge point to the sewer system and list of contaminants (if present) and expected concentration. The applicant may be required to collect groundwater samples representative of the

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<sup>20</sup> City of San Carlos, 2017, Citywide Storm Drain System Master Plan, dated April 2017.

<sup>21</sup> San Mateo County, 2019, *San Mateo County GIS open data: San Mateo Plain Subbasin*, <https://data-smcmaps.opendata.arcgis.com/datasets/san-mateo-plain-subbasin?geometry=-122.296%2C37.491%2C-122.242%2C37.503>, accessed October 15, 2024.

<sup>22</sup> California Water Service, 2021, 2020 Urban Water Management Plan: Mid-Peninsula District.

<sup>23</sup> Gregg Drilling, 2024, Northern California Groundwater Depth Table.

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water quality anticipated in the discharge if construction dewatering occurs in an area of known or potential groundwater contamination.

### Water Quality

Surface water quality is affected by point-source and non-point source pollutants. Point source pollutants are emitted at a specific point, such as a pipe, and nonpoint-source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Point-source pollutants are controlled with pollutant discharge regulations or water discharge requirements. Nonpoint-source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas.

Stormwater runoff pollutants vary based on land use, topography, the amount of impervious surface, the amount and frequency of rainfall, and irrigation practices. Runoff in developed areas typically contains oil, grease, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the “first flush,” when early rainfall flushes out pollutants that have accumulated on hardscape surfaces during the preceding dry months.

The San Francisco Bay RWQCB monitors surface water quality through implementation of the Basin Plan and designates beneficial uses for surface water bodies and groundwater within San Mateo County and San Carlos. The beneficial uses for surface water bodies and groundwater within the EIR Study Area are listed in Table 4.9-1, *Designated Beneficial Uses of Water Bodies in the EIR Study Area*.

**TABLE 4.9-1 DESIGNATED BENEFICIAL USES OF WATER BODIES IN THE EIR STUDY AREA**

Water Body	Designated Beneficial Use
<b>Surface Water</b>	
Belmont Slough	EST, RARE, SPWN, WILD, REC-1, REC-2
Belmont Creek	WARM, WILD, REC-1, REC-2
Steinberger Slough	EST, RARE, WILD, REC-1, REC-2
Smith Slough	EST, RARE, WILD, REC-1, REC-2
Pulgas Creek	WARM, WILD, REC-1, REC-2
Cordilleras Creek	WARM, WILD, REC-1, REC-2
San Francisco Bay Lower	IND, COMM, SHELL, EST, MIGR, RARE, SPWN, WILD, REC-1, REC-2, NAV
<b>Groundwater</b>	
Santa Clara Valley, San Mateo Plain	MUN, PROC, IND, AGR (Potential Use)

Notes: Municipal and Domestic Water Supply (MUN), Industrial Process Water Supply (PROC), Industrial Service Water Supply (IND), Agricultural Supply (AGR), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Fish Migration (MIGR), Navigation (NAV), Preservation of Rare and Endangered Species (RARE), Fish Spawning (SPWN), Warm Freshwater Habitat (WARM), Wildlife Habitat (WILD), Water Contact Recreation (REC-1), Noncontact Water Recreation (REC-2).

Source: San Francisco Bay RWQCB, 2024, *Water Quality Control Plan (Basin Plan)*.

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In addition to the establishment of beneficial uses and water quality objectives, another approach to improve water quality is a watershed-based methodology that focuses on all potential pollution sources and not just those associated with point sources. If a body of water does not meet established water quality standards under traditional point source controls, it is listed as an impaired water body under Section 303(d) of the Clean Water Act. For 303(d) listed water bodies, a limit is established that defines the maximum amount of pollutants that can be received by that water body. Only the Lower San Francisco Bay is a listed impaired water body affected by the EIR Study Area, and its associated pollutants of concern are presented in Table 4.9-2, *Listed Impaired Water Bodies in San Carlos*.

**TABLE 4.9-2 LISTED IMPAIRED WATER BODIES IN SAN CARLOS**

Name	Pollutants of Concern		
Lower San Francisco Bay	▪ DDT <sup>a</sup>	▪ Invasive Species	▪ Dieldrin <sup>b</sup>
	▪ Dioxin Compounds <sup>c</sup>	▪ Mercury	▪ Chlordane <sup>a</sup>
	▪ Furan Compounds <sup>d</sup>	▪ PCBs <sup>e</sup>	▪ Trash

Notes:

a. Used as a pesticide.

b. Used as an insecticide.

c. Burning processes, such as commercial or municipal waste incineration, backyard burning, and the use of fuels, such as wood, coal, or oil, produce dioxins. The compounds collect in high concentrations in soils and sediments.

d. Furan is a flammable liquid compound found in common organic solvents.

e. PCBs were used widely in electrical equipment like capacitors and transformers. They were banned in the US in 1979.

Source: State Water Resource Control Board, 2024, California 2018 Integrated Report.

## Flood Zones

FEMA determines floodplain zones to assist cities in mitigating flooding hazards through land use planning. FEMA also outlines specific regulations for any construction within a 100-year floodplain. The 100-year floodplain is defined as an area that has a 1 percent chance of being inundated during a 12-month period. FEMA also prepares maps for 500-year floods, which mean that, in any given year, the risk of flooding in the designated area is 0.2 percent. In some locations, FEMA also provides measurements of base flood elevations for the 100-year flood, which is the minimum height of the flood waters during a 100-year event. Base flood elevation is reported in feet above sea level. Depth of flooding is determined by subtracting the land's height above sea level from the base flood elevation. Areas within the 100-year flood hazard area that are financed by federally backed mortgages are subject to mandatory federal insurance requirements and building standards to reduce flood damage.

There are two main types of flooding that occur in the EIR Study Area: 1) tidal flooding and 2) riverine flooding. Tidal flooding occurs during king tides. Riverine flooding occurs when the local streams and rivers overtop their banks during extreme rainfall events. Coupled with flat topography and a high groundwater table, stormwater runoff from these events can exceed the capacity of the City's storm drain system. Tidal and riverine flooding can also occur simultaneously, and the effects are compounded by climate change and sea level rise. Localized flooding can also occur in flat, urbanized areas of the city after heavy rain events. San Carlos has experienced periodic flooding generally due to storm drain inlet blockages, runoff volumes exceeding drainage capacity, and overtopping of creeks.<sup>24</sup> Additionally, the

<sup>24</sup> City of San Carlos, 2017, Citywide Storm Drain System Master Plan, dated April 2017.

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eastern portion of the City is mostly flat and is subject to tidal influences associated with the Smith and Steinberger Sloughs to the northeast.

A map of the EIR Study Area locations that are within the 100-year floodplains is shown on Figure 4.9-2, *FEMA Flood Zones*. FEMA maps areas at risk of inundation from a 100-year flood, which has a one percent chance of occurring in any year, and a 500-year flood, where the risk of flooding is 0.2 percent annually, as shown in Figure 4.9-2. These areas are primarily located along creeks, including Pulgas Creek, Brittan Creek and Cordilleras Creek, and along and east of El Camino Real. The 100-year flood zone is also known as a Special Flood Hazard Area; homeowners with mortgages within the Special Flood Hazard Area are required to be protected by flood insurance. The locations of the 500-year floodplain are also shown on Figure 4.9-2, but there are no restrictions on building within the 500-year floodplain.

### Dam Inundation

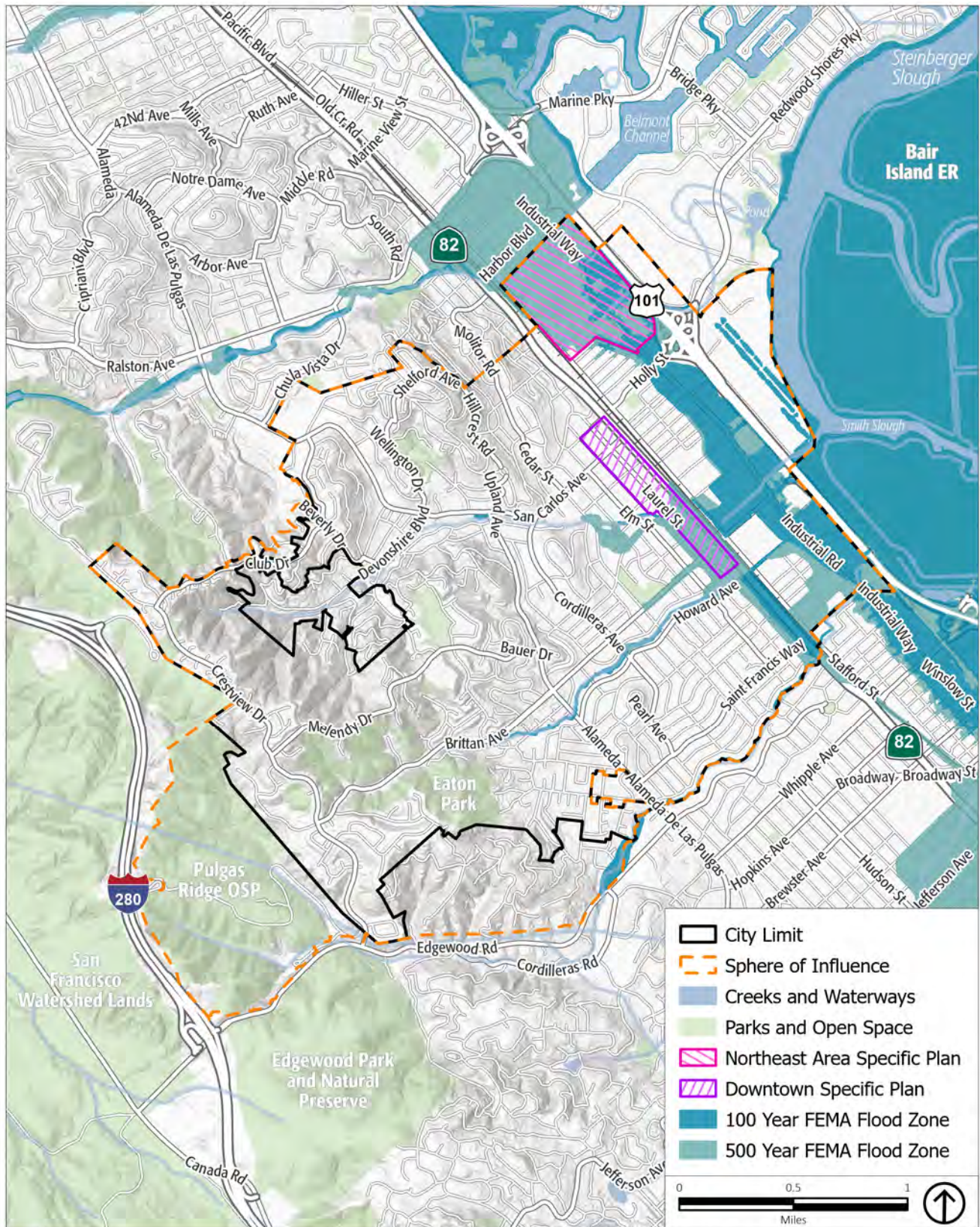
A dam inundation zone is an area in which flooding could occur due to failure of an upstream dam. Partial or complete dam failures can occur from one or more of the following causes:

- Earthquake
- Overtopping caused by floods that exceed the dam capacity due to Inadequate spillway capacity
- Internal erosion caused by embankment or foundation leakage, or piping/rodent activity
- Improper design resulting in structural failure of dam materials
- Foundation failure
- Inadequate operation, maintenance and upkeep
- Settling and cracking of concrete or embankment dams
- Failure of upstream dams on the same waterway.

There is only one dam that has the potential to cause flooding in San Carlos in the event of a catastrophic dam failure: Notre Dame Dam. Figure 4.9-3, *Dam Inundation Zones*, shows the Notre Dame dam inundation zone near San Carlos. The Notre Dame Dam is regulated by the California Division of Safety of Dams (DSOD). California Water Code requires owners of all dams under DSOD jurisdiction (except dams classified as low downstream hazard) to prepare dam inundation maps. These maps must be updated every ten years or when there are changes to downstream development or terrain. The dam inundation maps are submitted to DSOD for review and approval. Once the maps are approved, the dam owner must submit the map with the Emergency Action Plan to the California Office of Emergency Services for review and approval.



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Source: Federal Emergency Management Agency, 2022; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.9-2  
FEMA Flood Zones



## HYDROLOGY AND WATER QUALITY

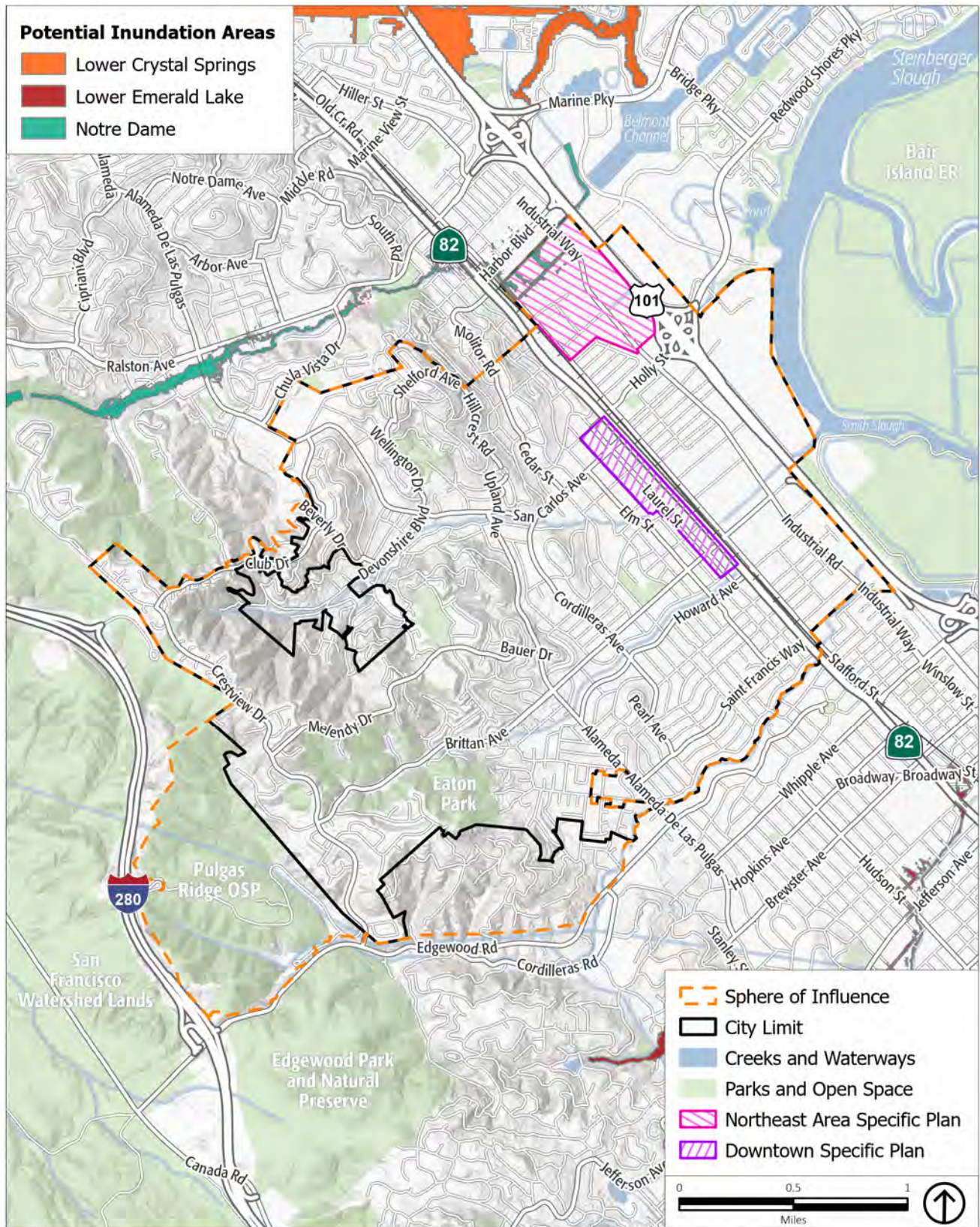


Figure 4.9-3  
Dam Inundation Zones

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Notre Dame Dam is a 51-foot-high earthen embankment dam and located in the City of Belmont. It impounds Water Dog Lake. Failure of this dam would result in released water flowing east, resulting in flooding in Belmont and the northern portion of the EIR Study Area along Belmont Creek. The dam is owned and operated by Belmont City Department of Public Works and is classified as an high hazard dam because it has the potential to impact highly populated areas and critical facilities or have short evacuation times.

There have been no dam failures in the San Carlos or County of San Mateo, other than the failure of a small dam in the community of El Granada in 1926.<sup>25</sup> There are no State or local restrictions for development in dam inundation zones; however, each dam owner is required to prepare an emergency action plan (EAP) and coordinate its response to a dam incident with local authorities. The San Mateo County Department of Emergency Management maintains copies of the most recent dam EAP and inundation maps and uses this information to plan notification for downstream areas in the event of a dam failure. Also, the Redwood City-San Carlos Fire Department (RC-SCFD) manages and maintains emergency plans and training for City staff and the community.

### Sea Level Rise

According to OneShoreline, San Mateo County as a whole is the most vulnerable county in California to sea level rise because of its extensive coastline and Bay shoreline and the number of people and value of properties and critical assets in sea level rise-prone areas. Along the shoreline of the City, sea levels are projected to rise approximately 2 feet by 2050 and up to 7 feet by 2100 (depending on the scenario). However, it is possible that sea levels could rise faster than these projections. Figure 4.9-4, *Sea Level Rise 2050*, and Figure 4.9-5, *Sea Level Rise 2100*, display the expected sea level rise in San Carlos in 2050 (2 feet), sea level rise in San Carlos in 2050 with a 100-year storm, and sea level rise in San Carlos in 2100 (7 feet), respectively, based on guidance from the Ocean Protection Council's 2018 Updated California Sea Level Rise Guidance, featuring models from the Adapting to Rising Tides program of the San Francisco Bay Conservation and Development Commission (BCDC). These figures do not reflect the improvements currently underway for the Foster City levee system, north of San Carlos.

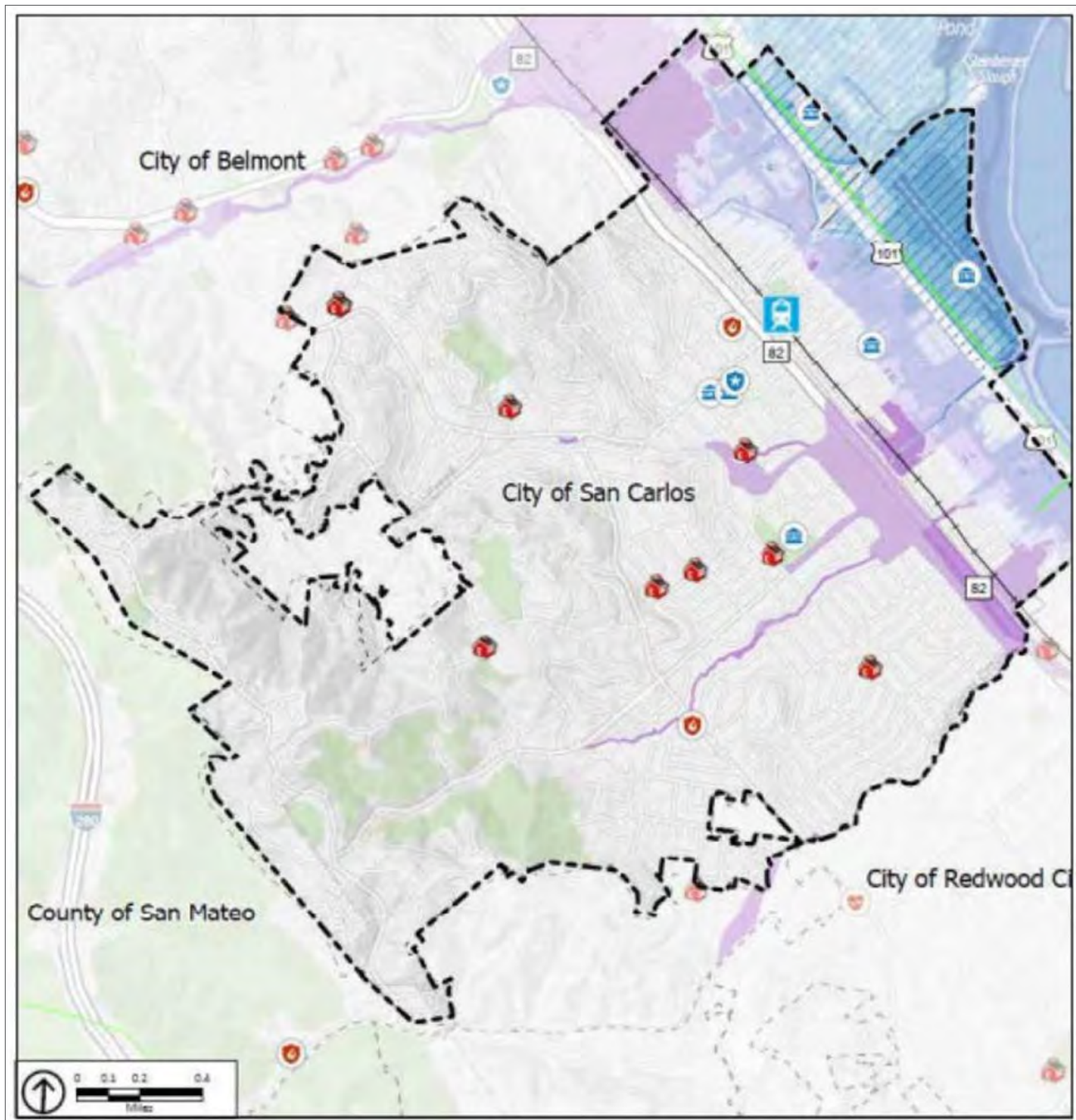
Rising sea levels can also cause the shoreline to flood more frequently and severely during storms or king tide events. King tides are abnormally high, predictable astronomical tides that occur about twice per year, with the highest tides occurring when the earth, moon, and sun are aligned. Because sea level rise will cause ocean levels to be higher during normal conditions, shoreline floods can reach further onto land. For example, a storm that has a one in five chance of occurring in a given year (known as a five-year storm) can create a temporary increase in sea levels of approximately 24 inches. The goals, policies, and actions in the proposed 2045 General Plan Reset call for planning for a medium- to high-risk aversion scenario in 2100. This scenario uses a 1 in 200 chance for sea level rise projections, providing a precautionary projection that can be used for less adaptive (less able to make changes that reduce harm in response to hazards), more vulnerable developments or populations that will experience moderate to high consequences if actions are not taken to address sea level rise in these areas.

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<sup>25</sup> San Mateo County, 2021. 2021 Multijurisdictional Local Hazard Mitigation Plan.



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Source: San Francisco Bay Conservation and Development Commission, 2017; Federal Emergency Management Agency, 2018; and San Carlos Climate Mitigation and Adaptation Plan (CMAP) (2021).

### Bayshore Flooding 2050

Depth in Feet

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10 - 12
- 12+

### FEMA Flood Hazard Zones

- 100 year
- 500 year
- Levee Protected

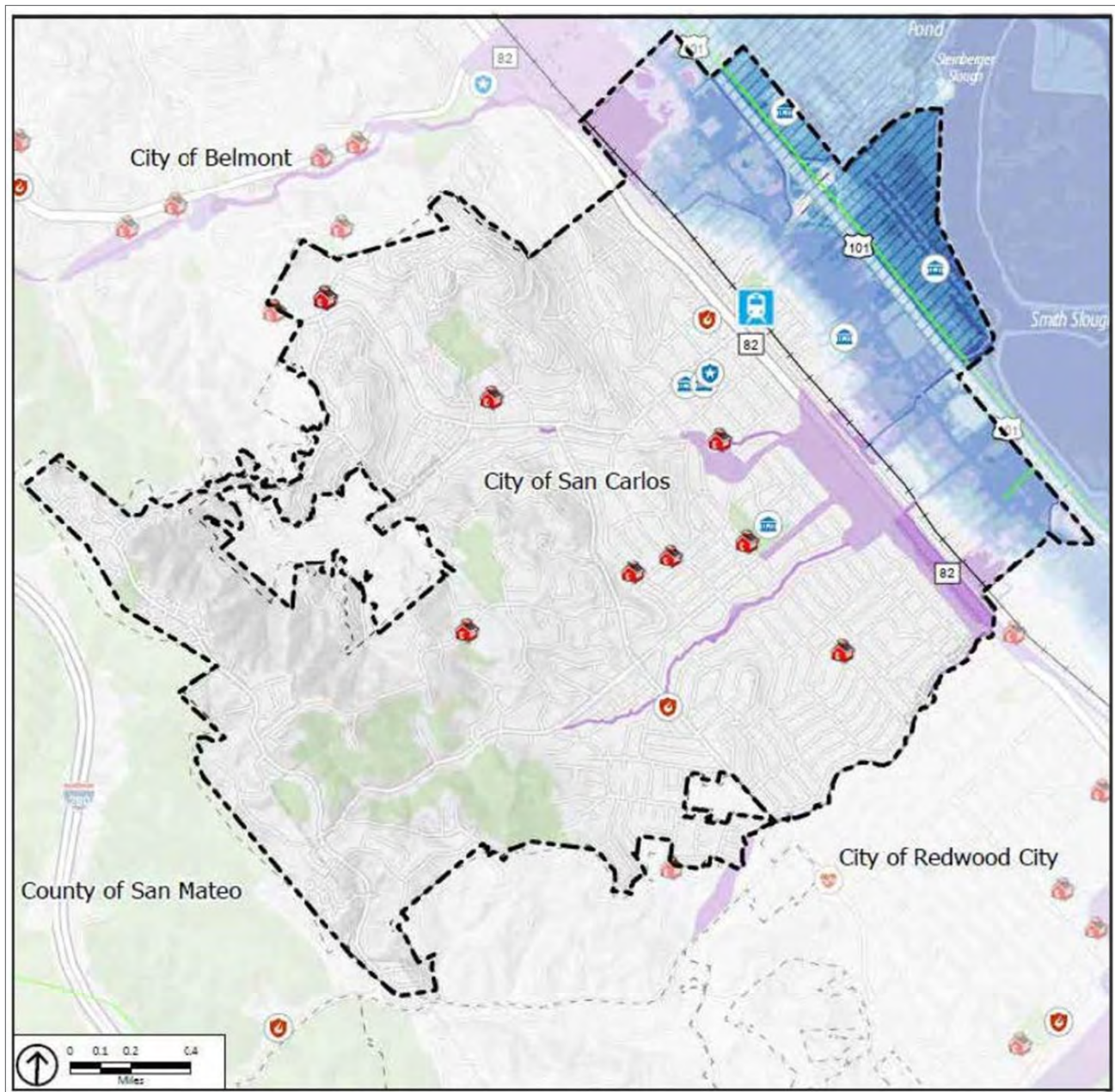
- City Boundary
- Parks and Open Space
- Caltrain Line
- Electrical Transmission Lines
- Caltrain Station

- Schools
- Community Facilities
- Fire Stations
- Police Stations
- Hospitals

Figure 4.9-4  
Sea Level Rise 2050



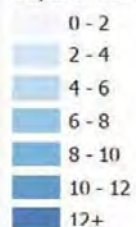
## HYDROLOGY AND WATER QUALITY



Source: San Francisco Bay Conservation and Development Commission, 2017; Federal Emergency Management Agency, 2018; and San Carlos Climate Mitigation and Adaptation Plan (CMAP) (2021).

### Bayshore Flooding 2100

Depth in Feet



### FEMA Flood Hazard Zones



Figure 4.9-5  
Sea Level Rise 2100

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Rising sea levels may impact a portion of San Carlos's housing, the San Carlos Airport, commercial buildings, essential infrastructure, and economic drivers, as low-lying land near the shoreline could be subject to more frequent shoreline flooding. Shoreline roads, including Highway 101, and infrastructure located beneath roads are at an increased risk of damage or failure due to subsidence exacerbated by sea level rise. Meanwhile, rising tides may increase groundwater levels, inundating contaminated soils. Given that some contaminated sites in San Carlos sit near the shoreline, rising groundwater may cause contaminated soils to leach into new, different areas.

Additionally, to proactively address the potential impacts of sea level rise, the City of San Carlos is working with regional, State, and federal partners. The City regularly participates in data gathering and mapping; collaborates with OneShoreline; and completes infrastructure projects to provide flood protection. The City is also engaged through the BayCAN collaborative, a Bay Area-wide collaborative network of local governments and organizations focused on responding effectively and equitably to the impacts of climate change.

### Tsunami

A tsunami is a series of traveling ocean waves generated by a rare, catastrophic event, including earthquakes, submarine landslides, and submarine or shoreline volcanic eruptions. Tsunamis can travel over the ocean surface at speeds of 400 to 500 miles per hour or more, and wave heights at the shore can range from inches to 50 feet. Factors influencing the size and speed of a tsunami include the source and magnitude of the triggering event, as well as off-shore and on-shore topography.

Tsunamis that could potentially impact the City can result from offshore earthquakes in or around the Bay Area or from distant events. It is most common for tsunamis to be generated by offshore subduction faults such as those in Washington, Alaska, Japan, and South America. Tsunami waves generated by these distant sites can travel across the ocean or down the coast but would result in several hours of warning time. Local tsunamis could also result from offshore strike-slip faults with little warning time. However, the Bay Area faults that are off the Pacific coastline or under portions of San Francisco Bay are not likely to produce significant tsunamis because they move side to side rather than up and down, which is the displacement needed to create significant tsunamis. The greatest risk of a significant tsunami in the Bay Area is from tsunamis generated by earthquakes elsewhere in the Pacific.

Although the Bay Area has experienced tsunamis in the past, they have not created significant damage. Most of the damage has occurred along the Pacific Coast. The 1964 Alaska earthquake resulted in wave heights of up to 1.1 meters along the San Francisco, Marin, and Sonoma County coastlines. The 2011 Magnitude 9.0 earthquake in Japan caused damage to marinas and ports in Santa Cruz and Crescent City, but no damage within San Francisco Bay.

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According to the County's MJHMP, the areas beyond the EIR Study Area to the northeast would be within a tsunami inundation area (i.e., Smith Slough, Steinberger Slough, and Bair Island).<sup>26</sup> However, the City of San Carlos and the EIR Study Area are not within a tsunami inundation area.

### Seiche

A seiche is an oscillation wave generated in a closed or partially closed body of water, which can be compared to the back-and-forth sloshing in a bathtub. Seiches can be caused by winds, changes in atmospheric pressure, underwater earthquakes, tsunamis, or landslides into the water body. Bodies of water such as bays, harbors, reservoirs, ponds, and swimming pools can experience seiche waves up to several feet in height during a strong earthquake. However, for a seiche to occur in San Francisco Bay, the wave frequency of a tsunami would have to match the resonance frequency of the Bay. The typical frequency of a tsunami is ten minutes to an hour, and the resonance frequency of San Francisco Bay is somewhere between one to ten hours. Therefore, tsunamis have frequencies too short to resonate within San Francisco Bay and a seiche is considered unlikely. There are no large bodies of water within the EIR Study Area that could trigger a seiche. Seiches associated with large bodies of water, such as Lake Tahoe and the Great Lakes are typically one foot high or less. Therefore, the probability that Notre Dame Dam would be overtopped by a seiche is negligible since all lakes or reservoirs have a freeboard greater than one foot.

### 4.9.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant hydrology and water quality impact if it 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 a 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; or
  - iv) impede or redirect flood flows.
- HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

<sup>26</sup> San Mateo County, 2024, Multi-Jurisdictional Local Hazard Mitigation Plan Resources, Mapping Tool, <https://www.smcgov.org/ceo/multijurisdictional-local-hazard-mitigation-plan-resources>, accessed October 17, 2024.

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HYD-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

HYD-6 In combination with past, present, and reasonably foreseeable projects, result in cumulative hydrology and water quality impacts in the area.

### 4.9.3 IMPACT DISCUSSION

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HYD-1	The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
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#### Construction

Future development projects within the buildout horizon of the proposed project would involve soil disturbance, construction, and operation of land uses that could generate pollutants affecting stormwater. Clearing, grading, excavation, and construction activities have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials, such as fuels, solvents, and paints, may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

To minimize these potential impacts, future development that involves the disturbance of one acre or more of land would require compliance with the Construction General Permit (CGP) Order WQ 2022-0057-DWQ, which includes the preparation and implementation of a SWPPP. A SWPPP requires the incorporation of BMPs to control sediment, erosion, and hazardous materials contamination of runoff during construction and prevent contaminants from reaching receiving water bodies. The CGP also requires that prior to the start of construction activities, the project applicant must file PRDs with the SWRCB, which includes a Notice of Intent, risk assessment, site map, annual fee, signed certification statement, and a SWPPP. The construction contractor is required to maintain a copy of the SWPPP at the site and implement all construction BMPs identified in the SWPPP during construction activities. Prior to the issuance of a grading permit, the project applicant is required to provide proof of filing of the PRDs with the SWRCB. Categories of potential BMPs that would be implemented for the proposed project are described in Table 4.9-3, *Construction Best Management Practices*.

**TABLE 4.9-3 CONSTRUCTION BEST MANAGEMENT PRACTICES**

Category	Purpose	Examples
Erosion Controls and Wind Erosion Controls	<ul style="list-style-type: none"> <li>Use project scheduling and planning to reduce soil or vegetation disturbance (particularly during the rainy season)</li> <li>Prevent or reduce erosion potential by diverting or controlling drainage</li> <li>Prepare and stabilize disturbed soil areas</li> </ul>	Scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, streambank stabilization, compost blankets, soil preparation/roughening, and non-vegetative stabilization

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**TABLE 4.9-3 CONSTRUCTION BEST MANAGEMENT PRACTICES**

Category	Purpose	Examples
Sediment Controls	<ul style="list-style-type: none"> <li>Filter out soil particles that have been detached and transported in water</li> </ul>	Silt fence, sediment basin, sediment trap, check dam, fiber rolls, gravel bag berm, street sweeping and vacuuming, sandbag barrier, straw bale barrier, storm drain inlet protection, manufactured linear sediment controls, compost socks and berms, and biofilter bags
Wind Erosion Controls	<ul style="list-style-type: none"> <li>Apply water or other dust palliatives to prevent or minimize dust nuisance</li> </ul>	Dust control soil binders, chemical dust suppressants, covering stockpiles, permanent vegetation, mulching, watering, temporary gravel construction, synthetic covers, and minimization of disturbed area
Tracking Controls	<ul style="list-style-type: none"> <li>Minimize the tracking of soil offsite by vehicles</li> </ul>	Stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash
Nonstorm Water Management Controls	<ul style="list-style-type: none"> <li>Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment</li> <li>Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges</li> </ul>	Water conservation practices, temporary stream crossings, clear water diversions, illicit connection/discharge, potable and irrigation water management, and the proper management of the following operations: paving and grinding, dewatering, vehicle and equipment cleaning, fueling and maintenance, pile driving, concrete curing, concrete finishing, demolition adjacent to water, material over water, and temporary batch plants
Waste Management and Controls (i.e., good housekeeping practices)	<ul style="list-style-type: none"> <li>Manage materials and wastes to avoid contamination of stormwater</li> </ul>	Stockpile management, spill prevention and control, solid waste management, hazardous waste management, contaminated soil management, concrete waste management, sanitary/septic waste management, liquid waste management, and management of material delivery storage and use

Source: Compiled by PlaceWorks from information provided in the California Stormwater Quality Association's Construction BMP Handbook.

Submittal of the PRDs and implementation of the SWPPP throughout the construction phase of development pursuant to the proposed project will address anticipated and expected pollutants of concern from construction activities. Furthermore, as required in SCMC Chapter 12.08, any construction project that involves land disturbance and requires a site development planning application must obtain a grading permit from the Public Works Department. In addition, the City complies with Section C.6, *Construction Site Control*, of the San Carlos MS4 permit and confirms implementation of appropriate BMPs with construction site inspections. As a result, water quality impacts associated with construction activities would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### Operational

Future development and activities under the proposed project may result in long-term impacts to the quality of stormwater and urban runoff, subsequently impacting downstream water quality and/or San Francisco Bay. Developments can potentially create new sources for runoff contamination through changing land uses. As a consequence, developments within the EIR Study Area as a whole may have the potential to increase the post-construction pollutant loadings of certain constituent pollutants

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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 MS4 permit (Order No. R2-2022-0018) and the SMCWPPP C.3 Regulated Projects Guide, new development and redevelopment projects that involve the creation and/or replacement of 5,000 square feet or more of impervious surface must incorporate low impact development (LID) site design, source control, and stormwater treatment measures to address post-construction stormwater runoff. These regulated projects would be required to submit a SCP and C.3 and C.6 Development Review Checklist with building plans, to be reviewed and approved by the City of San Carlos.

In addition, projects that create and/or replace one acre or more of impervious surfaces and are located in a mapped susceptible area must comply with the hydromodification requirements specified in the C.3.g provisions of the MS4 permit. The hydromodification provisions require that post-project runoff rates and durations must match pre-project runoff rates and durations for ten percent of the 2-year peak flow up to the pre-project 10-year peak flow. In general, the western and southwestern portions of San Carlos are within the areas subject to hydromodification requirements.

All regulated projects are required to prepare an SCP that demonstrates that the project incorporates site design measures and treatment facilities that will:

- Minimize imperviousness
- Retain or detain stormwater
- Slow runoff rates
- Reduce pollutants in post-development runoff

In particular, the SCP would show that all runoff from impervious areas is either dispersed to landscape or routed to a properly designed LID treatment facility.<sup>27</sup> LID is an approach to land development (or redevelopment) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features and minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to adhere to these principles, such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. Applied on a broad scale, LID can maintain or restore a watershed's hydrologic and ecological functions.

Since the proposed project does not include specific development plans, SCPs are not required at this time. New development and redevelopment projects within the EIR Study Area would be required to prepare SCPs consistent with the guidance in the SMCWPPP C.3 Regulated Guide and the MS4 permit at the time of project application.

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<sup>27</sup> SMCWPPP, 2020, C.3 Regulated Projects Guide.

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As part of the statewide mandate to reduce trash within receiving waters, the City is required to adhere to the requirements of the California Trash Amendments. 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 certified trash full capture systems and must be installed on all inlets by 2030.

Additionally, all development under to the proposed project would be required to comply with the requirements of the SCMC, which prohibits illicit discharge into the storm drain system and includes policies to reduce the pollutants in stormwater (Chapter 13.14.070) and protect the water quality of watercourses (Chapter 13.14.120). All development that discharges storm water associated with industrial activity shall also comply with the requirements of the General Industrial Permit (Order No. 2014-0057-DWQ, last amended in 2018).

The Environmental Management (EM) Element and Environmental Safety and Public Services (ESPS) Elements of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to hydrology and water quality. The following General Plan goals, policies, and actions would serve to minimize potential adverse impacts on water quality and stormwater discharge:

- **Goal EM-2:** Promote healthy streams and riparian corridors.
  - **Policy EM-2.7:** Retain Pulgas, Brittan, Cordilleras and Belmont Creek channels and their 100-year floodplains wherever possible as natural open space areas. These areas are to function as storm drainage facilities and as open space greenbelts to support natural habitat.
  - **Action EM-2.1:** Consider amending the Riparian Ordinance to strengthen stream protection requirements and reduce potential for flooding. Potential amendments may include evaluation of increased setbacks, limited walls and fences, requiring Best Management Practices (BMPs) for biotechnical bank stabilization and erosion control and vegetation management requirements.
  - **Action EM-2.2:** Consider establishing incentives to stabilize creek banks utilizing natural methods.
  - **Action EM-2.6:** Consider preparation of Watershed Management Plans for all watersheds, addressing flooding causes, improvement of creek functionality and water quality and creek channel restoration.
- **Goal EM-5:** Assure a high level of domestic water quality, promote water conservation and reduce toxics in run-off, including storm- water and the sanitary sewer system.
  - **Policy EM-5.1:** Reduce the discharge of toxic materials into the city's sanitary sewer and stormwater collection system by promoting the use of Best Management Practices (BMPs).
  - **Policy EM-5.2:** Promote the use of less toxic household and commercial cleaning materials.
  - **Policy EM-5.3:** Promote the conservation and efficient use of water in new and existing residences and by commercial and industrial consumers.
  - **Policy EM-5.4:** Encourage the use of drought-tolerant plants and efficient watering techniques for all City landscaping.

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- **Policy EM-5.5:** Recycled water distribution system (purple pipe) should be used for landscaping and other non-potable water uses for residential, commercial and industrial customers, where technically and financially feasible.
- **Policy EM-5.6:** Continue public education programs on water issues working with water service providers, local non-profits and other environmental organizations, including conservation measures and BMPs for residents, businesses, contractors and City employees.
- **Policy EM-5.7:** Encourage site designs that manage the quantity and quality of storm water run-off.
- **Policy EM-5.10:** Require the evaluation of potential groundwater depletion that could occur from new development through dewatering.
- **Action EM-5.1:** Evaluate amending the Zoning Code to maximize permeable surfaces or other water catchment methods for new development as applicable.
- **Action EM-5.2:** Utilize bioswales and other bio-filtration systems as applicable to cleanse run-off before it enters creeks and the San Francisco Bay.
- **Action EM-5.3:** Minimize road surface pollutant runoff by utilizing appropriate methods such as regular street sweeping.
- **Action EM-5.4:** Implement Climate Action Plan measures to provide for water-efficient landscaping.
- **Action EM-5.5:** Establish water conservation goals for City buildings and operations.
- **Action EM-5.6:** Evaluate potential incentives for the use of drought-tolerant landscaping and recycled water for landscape irrigation.
- **Action EM-5.9:** Monitor outside agencies responsible for cleaning up known toxic sites.
- **Action EM-5.10:** Implement the NPDES Stormwater Permit and for those properties exempt from the Permit, require a stormwater pollution prevention plan, including use of best management practices, to control erosion and sedimentation during construction.
- **Goal ESPS-2:** Reduce hazards associated with flooding and inundation.
  - **Policy ESPS-2.1:** Improve and maintain City storm drainage infrastructure in a manner that reduces flood hazards.
  - **Policy ESPS-2.2:** Maintain and prioritize restoration of a healthy riparian corridor in City-maintained flood control channels such as Pulgas Creek and Belmont Creek to reduce the risk of flooding due to erosion, siltation, blockage, and heavy undergrowth; and increase community access to channels with improved stormwater and flood management strategies.
  - **Policy ESPS-2.3:** Maintain a strong and enforceable Stream Development and Maintenance Ordinance for all city creeks and their tributaries.
  - **Policy ESPS-2.4:** Minimize impervious surfaces to reduce stormwater runoff and increase flood protection.



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- **Policy ESPS-2.5:** Evaluate flood hazards on a watershed level, taking into account all sources of water and the eventual end point of each source.
- **Policy ESPS-2.6:** Promote City staff knowledge and training on the relationship between watershed health and flood hazards.
- **Policy ESPS-2.7:** Coordinate with neighboring jurisdictions on approaches to flooding and creek maintenance.
- **Policy ESPS-2.8:** Continue to work with appropriate local, State, and federal agencies (such as FEMA, San Mateo County OneShoreline Program, City/County Association of Governments (CCAG) of San Mateo County, and San Francisco Bay Conservation and Development Commission (BCDC) to: (1) maintain the most current flood hazard and floodplain information and use it as a basis for project review; and (2) create public-private partnerships to guide development in accordance with federal, State, and local standards.
- **Policy ESPS-2.9:** Reduce losses due to flooding by encouraging property owners who experience flood damage to reconstruct their properties in a flood-resistant manner.
- **Policy ESPS-2.10:** Incorporate stormwater drainage systems in development projects to effectively control the rate and amount of runoff to prevent increases in downstream flooding potential.
- **Policy ESPS-2.11:** Continue to participate in the National Flood Insurance Program. To this end, the City shall ensure that its regulations are in full compliance with standards adopted by the Federal Emergency Management Agency.
- **Action ESPS-2.1:** Consider participating in a regional Watershed Management Plan to perform technical analysis to understand geotechnical, biological, and hydraulic conditions to model the hydrography of the city and identify options to reduce flooding risk and where opportunities exist to restore creeks within the watershed to a more naturalized condition. Options could include detaining or retaining stormwater runoff in upper portions of the watershed, adding capacity in the lower portions of the watershed and maintaining existing creek and channel capacity through improved maintenance. The Watershed Management Plan would seek to balance the two primary functions of creeks: flood control and riparian habitat.
- **Action ESPS-2.2:** Amend the Stream Development and Maintenance Ordinance to: (1) include all creeks and tributaries, including Pulgas Creek and Belmont Creek, to strengthen the effectiveness of existing policies and to create vital and accessible community open space with improved stormwater and flood management strategies; (2) increase the required setbacks and landscaping provisions from the existing creek top to improve stormwater detention capacity and to help address flooding issues and creek restoration; (3) prohibit general vehicle access along the creek within the Stream Development Ordinance overlay district.
- **Action ESPS-2.3:** Develop preferred streambank stabilization methods, which will guide private property owners in making repairs
- **Action ESPS-2.4:** Establish incentives for property owners to stabilize creek banks with natural methods

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- **Action ESPS-2.5:** Work with private property owners who own creek frontage and educate the public on bio-engineering of creeks to stabilize banks and maintain natural creek forms.
- **Action ESPS-2.6:** Seek to have property owners downstream of city limit maintain drainage channels in a responsible manner to avoid flooding.
- **Action ESPS-2.7:** Initiate flood insurance rate map revisions for City projects.
- **Action ESPS-8-8:** Develop and maintain an emergency notification system (e.g., SMC Alert) for the most vulnerable community members before, during, and after a climate hazard event and assist in their evacuation, if needed. This includes coordination with the San Mateo County OneShoreline program on its early flood warning notification system.

Adherence to SMCWPPP and MS4 permit requirements, in conjunction with implementation of the General Plan goals, policies, and actions listed above, would ensure that development under the proposed project would not violate any water quality standards or waste discharge requirements for both construction and operational phases, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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HYD-2	The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
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Implementation of the proposed project would result in a significant environmental impact if it would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Future development in the EIR Study Area could result in an increase in impervious surfaces, thus reducing groundwater recharge.

### Groundwater Recharge

Future development would be required to implement BMPs and LID measures—which include on-site infiltration—where feasible. The SMCWPPP guidance document and the MS4 Permit require site design measures, source control measures, LID standards, and hydromodification measures to be included in an SCP that must be submitted to and approved by the City. These measures minimize the impact of impervious areas by including pervious pavements, drainage to landscaped areas and bioretention areas, and the collection of rooftop runoff in rain barrels or cisterns for new development projects. These measures also increase the potential for groundwater recharge. In addition, groundwater within the EIR Study Area is not used by municipal water agencies and is limited in capacity and quality.

If construction dewatering is required with future development within the EIR Study Area, an application for a groundwater waste discharge permit must be completed and submitted to the City for review and approval. The applicant may be required to collect groundwater samples representative of the water quality anticipated in the discharge if construction dewatering occurs in an area of known or potential

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groundwater contamination. Construction dewatering could have a temporary effect on the shallow groundwater aquifer, but this effect would be limited in terms of the quantity of water withdrawn and the duration of the withdrawal. Therefore, construction dewatering would result in a *less-than-significant* impact in terms of groundwater recharge.

**Significance without Mitigation:** Less than significant.

### Groundwater Use

The groundwater basin that underlies most of the City of San Carlos is designated as a very low priority basin and therefore is not regulated under the Sustainable Groundwater Management Act. This is because there is very little groundwater use in this groundwater basin and it is mostly due to private well pumping in the areas south and outside of the City.

As discussed in Section 4.9.1.2, *Existing Conditions*, Cal Water-MPS and MPWD supply with water purchased from the SFPUC. The SFPUC's water supplies consist of surface water imported from the Sierra Nevada via the Hetch Hetchy Project and local surface water from the San Francisco Bay Region. Groundwater is not used for municipal water supply in the city.<sup>28</sup>

As discussed in impact discussion HYD-1, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to hydrology and water quality, including groundwater. In addition to the General Plan goal, policies, and actions listed in impact discussion HYD-1, the following proposed goal, policies, and actions would serve to protect the quality and quantity of groundwater resources in the city:

- **Goal ESPS-12:** A community protected against rising groundwater levels caused by sea level rise.
  - **Policy ESPS-12.1:** Study the effects of rising groundwater on people and the built environment.
  - **Policy ESPS-12.2:** Ensure the San Carlos municipal code protects development from rising groundwater levels. This may include measures to protect underground utilities from constant submersion, the construction of building foundations and roadbeds in saturated soils, the protection of underground structures, and the management of groundwater dewatered during construction.
  - **Action ESPS-12.1:** Coordinate with OneShoreline local jurisdictions, regional, and state agencies to study sea level rise's potential impacts on rising groundwater levels. The study could consider the impacts of rising groundwater levels on: saltwater intrusion into near shore groundwater aquifers, overland flooding, underground utility infrastructure and underground structures, increased soil liquefaction and subsidence risk; and movement or transport of toxic or hazardous materials at old contamination sites.

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<sup>28</sup> California Water Service, 2021, 2020 Urban Water Management Plan: Mid-Peninsula District.

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- **Action ESPS-12.2:** Continue to enforce the San Carlos Municipal Code requirements for development in areas of rising groundwater. Regularly update San Carlos' policies and codes to reflect the most recent technical and building/safety studies' findings regarding groundwater levels.

Future development under the project would not use groundwater supplies or interfere with groundwater use, and implementation of the General Plan goals, policies, and actions would further protect groundwater; therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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HYD-3	The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in a 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; or iv) impede or redirect flood flows.
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### Erosion and Siltation

New development or redevelopment within the EIR Study Area could result in an increase in impervious surfaces. This, in turn, could result in an increase in stormwater runoff, higher peak discharges to storm drains, and the potential to cause erosion or siltation in streams. Increases in tributary flows can exacerbate creek bank erosion or cause destabilizing channel incision.

All future development pursuant to the proposed project would be required to implement construction-phase BMPs as well as post-construction site design, source control measures, and treatment controls in accordance with the requirements of the CGP, the SCMC, the MS4 Permit, and the SMCWPPP C.3 Regulated Projects Guide. Typical construction BMPs include silt fences, fiber rolls, catch basin inlet protection, water trucks, street sweeping, and stabilization of truck entrance/exits. Each new development or redevelopment project that disturbs one or more acre of land would be required to prepare and submit a SWPPP to the SWRCB that describes the measures to control discharges from construction sites. In addition, under SCMC Chapter 12.08, the City has the authority to require submittal of an interim and final ESCP, if required by the City Engineer or Building Official. The ESCP must describe erosion and sediment control measures that will be implemented during the construction phase as well as final stabilization control measures as well as the calculation of maximum surface runoff amounts and sediment yield.

Once future development projects have been constructed, C.3 requirements in the MS4 permit for new development or redevelopment projects must be implemented and include site design measures, source control measures, LID, and treatment measures that address stormwater runoff and would reduce the

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potential for erosion and siltation. Site design measures include limits on clearing, grading, and soil compaction; minimizing impervious surfaces; conserving the natural areas of the site as much as possible; complying with stream setback ordinances; and protecting slopes and channels from erosion. LID measures include the use of permeable pavements, directing runoff to pervious areas, and the construction of bioretention areas. The SCP must also include operation and maintenance procedures and an agreement to maintain any stormwater treatment and control facilities for perpetuity. Adherence to the streambed alteration agreement process under Sections 1601 to 1606 of the California Fish and Game Code would further reduce erosion and siltation impacts that may occur due to streambed alterations. Projects subject to hydromodification must also maintain the pre-project creek erosion potential by implementing various control measures. Compliance with these regional and local regulatory requirements will ensure that erosion and siltation impacts from new development and redevelopment projects would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### Flooding On- or Off-Site

New development and/or redevelopment and changes in land uses could result in an increase in impervious surfaces, which in turn could result in an increase in stormwater runoff, higher peak discharges to drainage channels and creeks, and the potential to cause nuisance flooding in areas without adequate drainage facilities. However, all future development must comply with the requirements of the MS4 Permit and the SMCWPPP C.3 Regulated Projects Guide. Regulated projects must implement BMPs, including LID BMPs and site design BMPs, which effectively minimize imperviousness, retain or detain stormwater on-site, decrease surface water flows, and slow runoff rates. Projects that create and/or replace one acre of impervious surface must also adhere to the hydromodification requirements of the MS4 permit and the SMCWPPP document to ensure that post-project runoff does not exceed pre-project runoff for 10 percent of the 2-year to 10-year peak flow rates. Adherence to these regulatory requirements would minimize the amount of stormwater runoff from new development and redevelopment within the EIR Study Area. Therefore, future projects under the proposed project would not result in flooding on- or off-site, and impacts would be *less than significant*.

### Stormwater Drainage System Capacity

As discussed above, an increase in impervious surfaces with new development or redevelopment within the EIR Study Area could result in increases in stormwater runoff, which in turn could exceed the capacity of existing or planned stormwater drainage systems. All future development and redevelopment projects would be required to comply with the MS4 permit requirements and follow the SMCWPPP guidance document when designing on-site stormwater treatment facilities. The hydrology study and SCP for each project is subject to City review to verify that the on-site storm drain systems and treatment facilities can accommodate stormwater runoff from the site and would not exceed the capacity of downstream drainage systems at the point of connection. Also, implementation of the C.3 provisions of the MS4 permit for new development, which include LID design and bioretention areas, would minimize increases in peak flow rates or runoff volumes, thus reducing stormwater runoff to the storm drain system.

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Due to the built-out nature of the EIR Study Area, future development within the EIR Study Area would be mainly infill projects or the intensification of existing land uses and would be in developed urban areas with existing impervious surfaces and existing storm drain systems. With the implementation of the C.3 provisions for new projects within the EIR Study Area, there should not be a significant increase in impervious surfaces or stormwater runoff to the City's storm drain system.

Further, new development and redevelopment within the EIR Study Area would be typical urban uses and would not create substantial additional sources of polluted runoff. During the construction phase, projects would be required to prepare SWPPPs and implement erosion control plans, thus limiting the discharge of pollutants from the site. During operation, projects must implement BMPs and LID measures that minimize the amount of stormwater runoff and associated pollutants.

With implementation of these control measures and regulatory provisions to limit runoff from new development sites, the proposed project would not result in significant increases in runoff that would exceed the capacity of existing or planned storm drain facilities, and the impact is *less than significant*.

**Significance without Mitigation:** Less than significant.

### Redirecting Flood Flows

The discussion above regarding on- and off-site flooding is also applicable to the analysis of impeding or redirecting flood flows. Since new development projects are required to comply with C.3 provisions of the MS4 Permit and retain stormwater on-site via the use of bioretention facilities, any flood flows would also be retained for a period of time on-site, which would minimize the potential for flooding impacts. Impact discussion HYD-4 discusses the potential for impeding or redirecting flood flows with development in areas within the 100-year floodplain. Based on these discussions, impacts related to impeding or redirecting flood flows would be *less than significant*.

As discussed in impact discussion HYD-1, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to hydrology and water quality, including flood flows. In addition to the General Plan goals, policies, and actions identified in impact discussions HYD-1 and HYD-2, the following proposed goal, policies, and actions would serve to minimize flood risks:

- **Goal ESPS-11:** A community that is protected against sea level rise and safeguards the natural and built environment from inundation due to rising sea levels.
  - **Policy ESPS-11.1:** Coordinate with State, regional, and local agencies, including the City/County Association of Governments of San Mateo County, the Bay Conservation and Development Commission, and the San Mateo County Flood and Sea Level Rise Resiliency District (OneShoreline) on planning for sea level rise and developing response options, including a regionally coordinated sea level rise adaptation plan. Consider participating in partnerships that can provide technical assistance and potential funding for sea level rise resiliency planning.

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- **Policy ESPS-11.2:** Continue to work with appropriate local, State, and federal agencies (such as FEMA, San Mateo County OneShoreline Program, City/County Association of Governments (CCAG) of San Mateo County, and San Francisco Bay Conservation and Development Commission (BCDC) to maintain the most recent sea level rise mapping and information and use it as a basis for project review.
- **Policy ESPS-11.4:** Provide protection to or relocate critical facilities in the sea level rise zone to prevent damage from inundation.
- **Policy ESPS-11.5:** Integrate sea level rise planning into City processes.
- **Policy ESPS-11.6:** Ensure all new development and substantial retrofit projects are planned and designed to accommodate increases in sea level rise.
- **Action ESPS-11.1:** Coordinate with State recommendations and OneShoreline, identify mid-century and end of century sea level rise projections that would be consistently used by the city in planning efforts and to evaluate all private and public development applications to ensure projects in sea level rise inundation zones are protected from inundation over the life of the project. OneShoreline's standard for its shoreline project is to protect against the FEMA 100-year storm, plus six feet of sea level rise.
- **Action ESPS-11.5:** Cooperate with FEMA in its efforts to incorporate predictions of sea level rise in its Flood Insurance Studies and Flood Insurance Rate Maps (FIRM).
- **Action ESPS-11.7:** In coordination with OneShoreline, regional planning efforts, and State guidance, sea level rise adaptation strategies should use or restore natural features and ecosystem processes where feasible and appropriate as a preferred approach to the placement of hard shoreline protection. This includes systems and practices that use or mimic natural processes, such as permeable pavements, bioswales, and other engineered systems, such as levees that are combined with restored natural systems, to provide clean water, conserve ecosystem values and functions, and provide a wide array of benefits to people and wildlife.
- **Action ESPS-11.9:** Incorporate sea level rise in the development of watershed management plans and flood control infrastructure with a focus on nature based solutions.
- **Action ESPS-11.16:** Actively promote public education, research, information dissemination, and mitigation options on flooding hazards to the community including neighborhood associations, realtors, community-based organizations, and property owners in areas subject to increased flooding due to sea level rise.

With compliance with the MS4 permit, SMCWPPP requirements, and General Plan goals, policies, and actions, future development would not result in substantial erosion or siltation and would not substantially increase the rate of surface runoff which would result in flooding, impede or redirect flood flows, or exceed the capacity of the drainage system. Impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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HYD-4	The proposed project would not in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
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### Pollutant Release in Flood Hazard Zones

Future development projects could involve development of some projects in FEMA 100-year flood zones. As shown on Figure 4.9-2, *FEMA Flood Zones*, some areas around El Camino Real, between Highway 101 and El Camino Real, and along Pulgas and Brittan Creek are within the 100-year floodplain.

Future development in 100-year flood zones would be subject to floodplain requirements listed in SCMC Chapter 15.56. Prior to the start of construction or development within a Flood Hazard Area (i.e., 100-year floodplain), the City of San Carlos requires project applicants to obtain a development permit from the City's Floodplain Administrator and construct new development in accordance with the standards in SCMC Chapter 15.56.120. The standards of construction include provisions for flood risk reduction, including anchoring and flood-resistant materials and construction methods, with the lowest floors elevated above the base flood elevation or higher. OneShoreline recommends that new development be elevated 3 feet above the base flood elevation in areas that are impacted by sea level rise. Prior to occupancy of any building, a Letter of Map Revision (LOMR) and an elevation certificate must be provided to and approved by the City. Compliance with FEMA's National Flood Insurance Program requirements and SCMC requirements would reduce potential flood hazards and ensure that pollutants are not released during flood inundation.

Additionally, as discussed in Section 4.9.1.1, *Regulatory Framework*, the San Mateo Jurisdictional Annex of the MJHMP includes hazard mitigation actions to help reduce the risk of damage or injury from floods. These actions include continued implementation of floodplain management measures, incorporation of FEMA guidelines into the planning process, assessment and mitigation of urban drainage flooding.

### Pollutant Release in Dam Inundation Zones

As shown in Figure 4.9-3, *Dam Inundation Zone*, a small portion of San Carlos is within the inundation zone of the Notre Dame Dam. The probability of dam failure is very low, and San Carlos has never been impacted by a major dam failure. In addition, dam owners are required to maintain EAPs that include procedures for damage assessment and emergency warnings. An EAP identifies potential emergency conditions at a dam and specifies preplanned actions to help minimize property damage and loss of life should those conditions occur. EAPs contain procedures and information that instruct dam owners to issue early warning and notification messages to downstream emergency management authorities, such as the San Mateo County Department of Emergency Management and the RC-SCFD.

### Pollutant Release from Tsunami

Given the history of tsunamis in the San Francisco Bay Area, the risk of flooding due to a tsunami event is considered to be unlikely for the City of San Carlos.<sup>29</sup> Tsunami hazards in San Francisco Bay are much

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<sup>29</sup> San Mateo County, 2021. 2021 Multijurisdictional Local Hazard Mitigation Plan.



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smaller than along the Pacific Coast because the bays are enclosed body of waters. According to the County's MJHMP, the areas beyond the EIR Study Area to the northeast would be within a tsunami inundation area (i.e., Smith Slough, Steinberger Slough, and Bair Island).<sup>30</sup> However, the City of San Carlos and the EIR Study Area are not within a tsunami inundation area.

Due to the infrequent nature of tsunamis and relatively low predicted tsunami wave height in the area, the City is reasonably safe from tsunami hazards. In addition, there are various precautions and warning systems that would be implemented by the City in the event of a tsunami. The City uses an automated telephone and text message system (SMC Alert) that can notify affected portions of the community when emergency alerts or notifications are needed. Also, the National Oceanic and Atmospheric Administration operates the National Tsunami Warning Center and the Pacific Tsunami Warning Center that alert local authorities to order the evacuation of low-lying areas, if necessary. As discussed previously in Section 4.9.1, *Environmental Setting*, the probability of a seiche occurring that would cause flooding and the release of pollutants is negligible.

### Pollutant Release Due to Sea Level Rise

As discussed above under the "Flood Hazard" subheading, future development could involve development in areas subject to inundation by sea level rise and associated coastal flooding. As shown on Figure 4.9-4, *Sea Level Rise 2050*, and Figure 4.9-5, *Sea Level Rise 2100*, most of the EIR Study Area east of the railroad tracks is projected to be impacted by sea level rise by 2100.

The City is a member of OneShoreline, which is working to build solutions to the climate change impacts of sea level rise, flooding, and coastal erosion. Potential adaptation measures include elevating structures to account for sea level rise, shoreline setbacks, disclosure requirements, raising shoreline levees and floodwalls, and raising roadways to maintain evacuation routes.

Future development within 100 feet of San Francisco Bay shoreline would be subject to review and approval by the BCDC. Future large shoreline projects, including shoreline protection projects, would be required to conduct a sea level rise risk assessment and be designed to be resilient to a midcentury sea level rise projection. BCDC requires that, if it is likely that the project will remain in place longer than midcentury, an adaptive management plan be developed to address the long-term impacts that will arise, based on the risk assessment. Future development more than 100 feet inland from San Pablo or San Francisco Bay shoreline would not be subject to BCDC review. However, future development would be required to comply with SCMC Chapter 15.56, which restricts development in floodable areas and requires protection for new development within inundation areas.

Sea level rise is also expected to raise groundwater levels, inundating contaminated soils. Given that some contaminated sites in San Carlos sit near the shoreline, rising groundwater associated with sea level rise may cause release of pollutants.

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<sup>30</sup> San Mateo County, 2024, Multi-Jurisdictional Local Hazard Mitigation Plan Resources, Mapping Tool, <https://www.smcgov.org/ceo/multijurisdictional-local-hazard-mitigation-plan-resources>, accessed October 17, 2024.

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Sea level rise and associated groundwater rise are considered to be an effect of the environment on the project. As explained in Chapter 4, *Environmental Analysis*, of this Draft EIR, the California Supreme Court has determined that the evaluation of the significance of project impacts under CEQA should focus on the potential impacts of the proposed project on the environment, including whether the proposed project may exacerbate any existing environmental hazards. Sea level rise is an existing environmental hazard in San Carlos. The discussion in this section explains the potential of the proposed project to exacerbate impacts from sea level rise. However, the effects of sea level rise on the proposed project are not subject to CEQA review following the *California Building Industry Association vs. Bay Area Air Quality Management District* (CBIA vs. BAAQMD) case.<sup>31</sup> Therefore, this EIR does not make a finding regarding level of impact from sea level rise.

### Summary

As discussed in impact discussions HYD-1 and HYD-3, the Environmental Management (EM) Element and Environmental Safety and Public Services (ESPS) Elements of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to hydrology and water quality. The General Plan goals, policies, and actions listed in impact discussions HYD-1 and HYD-3 would serve to address the potential for flooding and dam inundation. In conjunction with the implementation of the City's floodplain management requirements, coordination with OneShoreline, and activation of the City's emergency response system in the case of a dam failure or tsunami, the potential impact that there would be a release of pollutants from flooding, tsunamis, or seiches would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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HYD-5	The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
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Adherence to the State CGP, the SCMC, the MS4 Permit, and the SMCWPPP guidance document would ensure that surface and groundwater quality are not adversely impacted during construction and operation of development pursuant to the proposed project. As a result, future development would not obstruct or conflict with the implementation of the San Francisco Bay Basin Water Quality Control Plan. Also, future development would be served by either Cal Water-MPS or MPWD, which rely solely on surface water supply. Groundwater is not currently used or planned to be used as a municipal water supply source, and the groundwater basin that includes the City of San Carlos is not regulated under the Sustainable Groundwater Management Act, because of very limited groundwater use, and is not required to prepare a groundwater sustainability plan. Therefore, the proposed project would not

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<sup>31</sup> California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369.

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obstruct or conflict with the RWQCB's Basin Plan or a groundwater management plan, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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HYD-6	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative hydrology and water quality impacts in the area.
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The geographic context used for the cumulative assessment to hydrology, drainage, flooding, and water quality encompasses the watersheds within the EIR Study Area, as shown on Figure 4.9-1, *San Carlos Watersheds*. New development in these watersheds could increase impervious areas, thus increasing runoff and flows into the storm drainage systems. Cumulative development projects would be required to comply with the MS4 Permit, implement BMPs that direct drainage to landscaped areas, and integrate bioretention facilities into the site design.

All projects would be required to comply with the SCMC and various water quality regulations that control construction-related and operational discharge of pollutants into stormwater. The water quality regulations implemented by the San Francisco Bay RWQCB take a basin-wide approach and consider water quality impairment in a regional context. For example, the NPDES Construction Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the MS4 Permit encompasses all of the surrounding municipalities to manage stormwater systems and be collectively protective of water quality. Projects in these watersheds would implement structural and nonstructural source-control BMPs that reduce the potential for pollutants to enter runoff, and treatment control BMPs that remove pollutants from stormwater.

Projects in the EIR Study Area watersheds may be constructed within 100-year flood zones, areas of sea level rise, or dam inundation zones. Projects within the 100-year flood zone would be mandated to purchase flood insurance through the National Flood Insurance Program. Projects within inundation zones and areas subject to sea level rise may also purchase voluntary flood insurance through this program. In addition, other jurisdictions within these watersheds regulate development within flood zones in a similar manner as SCMC Chapter 15.56 and in compliance with FEMA standards to limit cumulative flood hazard impacts.

Therefore, cumulative impacts to hydrology, drainage, and flooding would be *less than significant*, and impacts of the proposed project would not be cumulatively considerable.

**Significance without Mitigation:** Less than significant.

## HYDROLOGY AND WATER QUALITY

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## LAND USE AND PLANNING

### 4.10 LAND USE AND PLANNING

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to land use and planning, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.10.1 ENVIRONMENTAL SETTING

##### 4.10.1.1 REGULATORY FRAMEWORK

###### State Regulations

###### *Cortese-Knox-Hertzberg Act*

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000<sup>1</sup> established a Local Agency Formation Commission (LAFCo) in each county in California, and authorized these commissions to review, approve, or deny proposals for boundary changes and incorporations for cities, counties, and special districts. The LAFCo established a “sphere of influence” (SOI) for cities within their jurisdiction that describes the city's probable future physical boundaries and service area. The legislation identifies that the logical formation and determination of local agency boundaries is an important factor in promoting orderly development, discouraging urban sprawl, preserving open space and prime agricultural lands, and efficiently extending government services.

###### *State Density Bonus Law*

The State Density Bonus Law (California Government Code Sections 65915-65918) encourages the development of affordable and senior housing, including an increase in project densities depending on the amount of affordable housing provided. Cities and counties are required to grant a density bonus and other incentives or concessions to housing projects which contain one of the following:

- At least 5 percent of the housing units are restricted to very low income residents.
- At least 10 percent of the housing units are restricted to lower income residents.
- At least 10 percent of the housing units in a for-sale common interest development are restricted to moderate income residents.
- 100 percent of the housing units (other than manager's units) are restricted to very low, lower and moderate income residents (with a maximum of 20 percent moderate).

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<sup>1</sup> California Government Code, Sections 56000–56001.

## LAND USE AND PLANNING

- At least 10 percent of the housing units are for transitional foster youth, disabled veterans or homeless persons, with rents restricted at the very low income level.
- At least 20 percent of the housing units are for low income college students in housing dedicated for full-time students at accredited colleges.
- The project donates at least one acre of land to the city or county for very low income units, and the land has the appropriate general plan designation, zoning, permits and approvals, and access to public facilities needed for such housing.
- The project is a senior citizen housing development (no affordable units required).
- The project is a mobile home park age-restricted to senior citizens (no affordable units required).

### *Senate Bill 9*

Senate Bill (SB) 9 (Chapter 162, Statutes of 2021) requires ministerial approval of a housing development with no more than two primary units in a single-family zone, the subdivision of a parcel in a single-family zone into two parcels, or both. SB 9 facilitates the creation of up to four housing units in the lot area typically used for one single-family home.<sup>2</sup>

### *Senate Bill 1211*

Approved in September 2024, this bill authorizes, under that variation, up to 8 detached accessory dwelling units (ADU) to be created on a lot with an existing multifamily dwelling, provided that the number of ADUs does not exceed the number of existing units on the lot, and up to 2 detached ADUs on a lot with a proposed multifamily dwelling.<sup>3</sup>

## Regional Regulations

### *Plan Bay Area 2050*

*Plan Bay Area 2050* is the regional transportation plan/sustainable community strategy, as mandated by the Sustainable Communities and Climate Protection Act (SB 375). *Plan Bay Area 2050* lays out a development scenario for the nine-county Bay Area region that works to align transportation and land use planning in order to reduce vehicle miles traveled through modified land use patterns. The current *Plan Bay Area 2050* projects growth and development patterns through 2050 and was adopted in October 2021.<sup>4</sup>

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<sup>2</sup> California Department of Housing and Community Development, September 2024, SB 9 Fact Sheet, <https://www.hcd.ca.gov/sites/default/files/docs/planning-and-community/sb-9-fact-sheet.pdf>, accessed on December 10, 2024.

<sup>3</sup> California Legislative Information, Senate Bill No. 1211, [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=202320240SB1211](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202320240SB1211), accessed December 10, 2024.

<sup>4</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed October 17, 2024.

## LAND USE AND PLANNING

*Plan Bay Area 2050* is prepared and regularly updated by the Metropolitan Transportation Commission (MTC) in partnership with the Association of Bay Area Governments (ABAG), Bay Area Air Quality District (BAAQMD), and the Bay Conservation and Development Commission (BCDC). Each of the agencies has a different role in regional governance. ABAG primarily does regional land use planning, housing, environmental quality, and economic development; MTC is tasked with regional transportation planning, coordinating, and financing; BAAQMD is responsible for regional air pollution regulation; and BCDC's focus is to preserve, enhance, and ensure responsible use of the San Francisco Bay.

As described in Chapter 4, *Environmental Analysis*, of this Draft EIR, *Plan Bay Area* designates Priority Development Areas (PDAs) and Transit Priority Areas (TPAs) throughout the region. PDAs are areas along transportation corridors which are served by public transit that allow opportunities for development of transit-oriented, infill development within existing communities that are expected to host the majority of future development. TPAs are similar in that they are formed within one-half mile around a major transit stop such as a transit center or rail line. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4 of this Draft EIR, the EIR Study Area has one PDA and one TPA. The PDA is called Railroad Corridor and includes El Camino Real and the downtown area. The TPA surrounds El Camino Real and the Caltrain station in San Carlos.

*Plan Bay Area 2050* distributes projected future growth across the San Francisco Bay Area region in order to meet its GHG emissions reduction, housing, and other performance targets, but it is not intended to override local land use control. Cities and counties, not MTC/ABAG, are ultimately responsible for the manner in which their local communities continue to be built out in the future. For this reason, cities and counties are not required to revise their land use policies and regulations, including general plans, to be consistent with the regional transportation plan or an alternative planning strategy. Rather than increase regional land use control, *Plan Bay Area 2050* facilitates implementation by expanding incentives and opportunities available to local jurisdictions to support growth in PDAs. In addition to funding transportation and planning projects in PDAs, *Plan Bay Area 2050* sets the stage for cities and counties to increase the efficiency of the development process, if they choose, for projects consistent with *Plan Bay Area* and other state legislation.<sup>5</sup>

### *Airport Land Use Compatibility Plan*

The City/County Association of Governments of San Mateo County (C/CAG) Board of Directors serves as the airport land use commission for San Mateo County. The Airport Land Use Commission reviews proposals for general plans, specific plans, zoning ordinances, and land use development proposals in the vicinity of the San Carlos Airport to ensure that future land uses in the surrounding area remain compatible with the realistically foreseeable, ultimate potential aircraft activity. The Airport Land Use Compatibility Plans (ALUCP) for the three public airports in San Mateo County are adopted by C/CAG, the Airport Land Use Commission (ALUC) responsible for promoting land use compatibility around the County's airports in order to minimize public exposure to excessive noise and safety hazards. Amendments were most recently made to the San Carlos ALUCP in 2022. The ALUCPs describe a series of

<sup>5</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, 2022, Frequently Asked Questions: Does *Plan Bay Area* override local land use control?, <https://www.planbayarea.org/2040-plan/quick-facts/faq-page#n4851>, accessed October 17, 2024.

## LAND USE AND PLANNING

land use safety and compatibility zones and associated guidelines for development around each airport that are intended to prevent development that is incompatible with airport operations. These regulations include height restrictions based on proximity to the airport and flight patterns. The ALCUPs delineate two Airport Influence Areas (AIA), Area A and Area B, within proximity to each airport. As a requirement for development located in Area A, the presence of existing airports within two miles of the property must be disclosed in the notice of intention to offer the property for sale. For development located within Area B of the AIA, the C/CAG Board shall exercise its statutory duty to review proposed land development proposals, among other plans, ordinances, amendments, and actions.

The Comprehensive Airport Land Use Compatibility Plan for the Environs of the San Carlos Airport adopted in 2015 sets forth land use compatibility criteria, compatibility zones, development standards, and policies pertaining to noise, safety, airspace protection, and overflight standards, and establishes the planning boundaries that define height, tall structures, noise, and safety zones for policy implementation.<sup>6</sup>

### Local Regulations

#### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.10.3, *Impact Discussion*.

The existing 2030 General Plan contains 19 land use designations, listed below.

- |   |  |
|---|--|
| ▪ Single Family, 3 DUs/Ac                           | ▪ Neighborhood Retail                          |
| ▪ Single Family, 6 DUs/Ac                           | ▪ Neighborhood Retail/Mixed Use, 75-120 DUs/Ac |
| ▪ Multi-family, 15-20 DUs/Ac                        | ▪ Planned Industrial                           |
| ▪ Multi-family, 45-59 DUs/Ac                        | ▪ General Commercial – Industrial              |
| ▪ Multi-family, 75-100 DUs/Ac                       | ▪ Public                                       |
| ▪ Mixed Use, 30-40 dwelling units per acre (DUs/Ac) | ▪ Park   |
| ▪ Mixed Use, 38-50 DUs/Ac                           | ▪ Open Space                                   |
| ▪ Mixed Use, 75-100 DUs/Ac                          | ▪ Open Space – Schools                         |
| ▪ Mixed Use, 90-120 DUs/Ac                          | ▪ Airport                                      |

As described in Chapter 3, *Project Description*, the proposed project does not include any amendments to the land use designations or land use map.

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<sup>6</sup> City of San Carlos, October 2022, City of San Carlos Focused General Plan Update Draft Environmental Impact Report SCH# 2021120442, [https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W\\_6WSLGBNyxK0vcg\\_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0](https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W_6WSLGBNyxK0vcg_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0), accessed November 4, 2024.



## LAND USE AND PLANNING

### *San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to land use and planning as follows:

- Title 17, *Subdivisions*, regulates and controls the design and improvement of subdivisions and to ensure their compliance with applicable policies and regulations of the City of San Carlos. Within this title the Subdivisions Maps Act is implemented.
- Title 18, *Zoning Code*, divides the city into distinct zones in order to implement the land use and development policies in the General Plan. Among the primary objectives of the Zoning Code are the regulation of building form, placement, density, and the provision of sufficient parking and open spaces in conjunction with development.

### *Other City Land Use Plans*

All specific plans, area plans, master plans, or similar plans—such as a climate adaptation plan or a hazard mitigation plan—and zoning in the city must be consistent with the General Plan. The following describes some of the other key plans that guide development in San Carlos.

- **Economic Development Plan.** The San Carlos 2021-2024 Economic Development Plan sets forth implementation policies and initiatives to direct the City's investment in economic development opportunities. The plan, which is updated annually, focuses on four major themes: nurture placemaking and beautification, support enhanced connectivity and mobility, foster growth in the business community, and encourage smart real estate development.
- **City of San Carlos Climate Mitigation and Adaptation Plan.** The 2021 Climate Mitigation and Adaptation Plan (CMAP) is San Carlos' strategic plan to reduce greenhouse gas (GHG) emissions and to adapt to changing climate conditions.
- **East Side Innovation District Vision Plan.** Approved in 2021, the East Side Innovation District Vision Plan sets forth clear goals and principles written to achieve the desired character for this area of the City. The East Side Innovation District applies to the area east of El Camino Real and west of US Highway 101 and is bounded by Brittan Avenue to the south and Holly Street to the north.

### 4.10.1.2 EXISTING CONDITIONS

The City of San Carlos is a predominately residential city. The railroad tracks and El Camino Real, running roughly north to south, separate the majority of the city's residential neighborhoods and Downtown on the west side from research and development, life sciences, industrial, and large-scale retail uses and the airport on the east side.

Residential uses are the predominant land use in San Carlos, and account for more than half of the total land area. Mixed-use land uses total eight acres, less than one percent of city land uses. Commercial and light industrial land uses comprise 14 percent and public facilities and institutions makes up nine percent. Park and open space uses encompass approximately 307 acres or 19 percent of city land uses.

## LAND USE AND PLANNING

Parking uses total 20 acres or less than one percent, while vacant land makes up three percent of the project area.<sup>7</sup>

Residential uses, which are the largest land use category, account for 55 percent of the project area. Residential uses are comprised of single-family, multi-family, and mixed use categories. Single-family use is generally considered one house per lot. Single-family residential use is over 50 percent of the entire project area and is located throughout San Carlos, including east of El Camino. Multi-family use is generally considered more than one housing unit on a lot. Multi-family use can include stacked flats and townhomes. Like single-family use, multi-family uses are found throughout the project area. Mixed-use combines residential use either vertically or horizontally with a non-residential use, typically a commercial use. Mixed-use primarily occurs along El Camino Real. Over 90 percent of all residential land use is single-family land use.<sup>8</sup>

Low residential density (defined as up to twenty units per net acre, in accordance with the San Carlos Zoning Ordinance) and medium residential density (up to 59 units per net acre) uses are concentrated in the east-central portion of San Carlos between San Carlos Avenue, Cherry Street, and Laurel Street west of El Camino Real and US-101. Of the single-family residential zoning districts, the most predominant is the RS-6 Single Family Zoning District, located throughout San Carlos and west of US 101.<sup>9</sup>

Medium density residential development allows for densities of up to 59 units per acre and accommodates stacked flats, townhomes, and rowhouses developed at a scale and form appropriate to neighborhood context and adjacent single-family residential uses. Medium density residential development is concentrated in the Downtown area, Laurel Street and the El Camino Real corridor. Medium density housing is also found along the southern edge of the Devonshire area and along San Carlos' western boundary.<sup>10</sup>

ADUs and Junior Accessory Dwelling Units (JADUs) are another residential form found in San Carlos. Consistent with SB 9, San Carlos allows ADUs to be established on any lot in any zoning district where a primary single-unit dwelling has been previously established or is proposed to be established in

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<sup>7</sup> City of San Carlos, October 2022, City of San Carlos Focused General Plan Update Draft Environmental Impact Report SCH# 2021120442, [https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W\\_6WSLGBNyxK0vcg\\_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0](https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W_6WSLGBNyxK0vcg_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0), accessed November 4, 2024.

<sup>8</sup> City of San Carlos, October 2022, City of San Carlos Focused General Plan Update Draft Environmental Impact Report SCH# 2021120442, [https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W\\_6WSLGBNyxK0vcg\\_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0](https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W_6WSLGBNyxK0vcg_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0), accessed November 4, 2024.

<sup>9</sup> City of San Carlos, October 2022, City of San Carlos Focused General Plan Update Draft Environmental Impact Report SCH# 2021120442, [https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W\\_6WSLGBNyxK0vcg\\_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0](https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W_6WSLGBNyxK0vcg_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0), accessed November 4, 2024.

<sup>10</sup> City of San Carlos, October 2022, City of San Carlos Focused General Plan Update Draft Environmental Impact Report SCH# 2021120442, [https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W\\_6WSLGBNyxK0vcg\\_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0](https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W_6WSLGBNyxK0vcg_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0), accessed November 4, 2024.

## LAND USE AND PLANNING

conjunction with construction of a second unit.<sup>11,12</sup> ADUs are also allowed on multi-family sites and, according to SB 1211, up to eight detached ADUs to be created on a lot with an existing multi-family dwelling, provided that the number of ADUs does not exceed the number of existing units on the lot, and up to two detached ADUs on a lot with a proposed multifamily dwelling.<sup>13</sup>

Mixed-use development combines two or more types of land use into a building or set of buildings that are physically and functionally integrated and mutually supporting. This can be a combination of residential, commercial, office, institutional, or other land uses. Mixed-use development accommodating 50 or more units per acre occurs along the eastern portion of El Camino Real corridor east of San Carlos Avenue, with the highest allowed density occurring in the Mixed Use – San Carlos Avenue zoning district. Mixed-use districts account for less than one percent of the total land use in San Carlos.<sup>14</sup>

Other land uses include light and heavy industrial, general commercial, landmark commercial, neighborhood retail, airport, planned development, parks, and open space.<sup>15</sup>

Commercial development covers six percent of the project area. Office commercial uses containing business, professional, and medical services make up three percent, while industrial uses make up seven percent of total land area. Industrial uses include large manufacturing businesses, biotechnical and biomedical firms, and light and heavy industrial uses. Industrial uses are predominately located east of US 101 and between US 101 and El Camino Real. San Carlos Airport is located at the City's eastern edge on land owned by San Mateo County.<sup>16</sup>

Little vacant land exists within San Carlos (approximately three percent of the project area). Vacant land is defined as having no building structures constructed on the land. Vacant land does not include parks

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<sup>11</sup> City of San Carlos, October 2022, City of San Carlos Focused General Plan Update Draft Environmental Impact Report SCH# 2021120442, [https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W\\_6WSLGBNyxK0vcg\\_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0](https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W_6WSLGBNyxK0vcg_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0), accessed November 4, 2024.

<sup>12</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, Plan Bay Area 2050, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed October 17, 2024.

<sup>13</sup> California Legislative Information, Senate Bill No. 1211, [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=202320240SB1211](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202320240SB1211), accessed December 10, 2024.

<sup>14</sup> City of San Carlos, October 2022, City of San Carlos Focused General Plan Update Draft Environmental Impact Report SCH# 2021120442, [https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W\\_6WSLGBNyxK0vcg\\_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0](https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W_6WSLGBNyxK0vcg_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0), accessed November 4, 2024.

<sup>15</sup> City of San Carlos, October 2022, City of San Carlos Focused General Plan Update Draft Environmental Impact Report SCH# 2021120442, [https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W\\_6WSLGBNyxK0vcg\\_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0](https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W_6WSLGBNyxK0vcg_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0), accessed November 4, 2024.

<sup>16</sup> City of San Carlos, October 2022, City of San Carlos Focused General Plan Update Draft Environmental Impact Report SCH# 2021120442, [https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W\\_6WSLGBNyxK0vcg\\_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0](https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W_6WSLGBNyxK0vcg_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0), accessed November 4, 2024.

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or open space, which is “vacant” or open by design. Vacant land can occur in each of the General Plan and zoning designated areas.<sup>17</sup>

### 4.10.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant land use and planning impact if it would:

- LAND-1      Physically divide an established community.
- LAND-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.
- LAND-3      In combination with past, present, and reasonably foreseeable projects, result in cumulative land use and planning impacts in the area.

### 4.10.3 IMPACT DISCUSSION

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<b>LAND-1</b>	<b>The proposed project would not physically divide an established community.</b>
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The physical division of an established community typically refers to the construction of a physical feature or the removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community or between a community and outlying areas. For example, an airport, roadway, or railroad track through an existing community could constrain travel from one side of the community to another or impair travel to areas outside of the community.

Future development within the buildout horizon of the proposed project would not result in a change in land use or zoning that would cause the construction or removal of any physical features or means of access throughout the EIR Study Area or the region. The proposed project plans for increased development in the EIR Study Area. However, the proposed project does not propose any changes to the overall land use pattern in the EIR Study Area. As described in Chapter 3, *Project Description*, of this Draft EIR the majority of new housing in San Carlos is expected on infill parcels near Downtown, along the El Camino Real corridor, along Old County Road between Holly Street and Terminal Avenue, and along East San Carlos Avenue. Most of the commercial growth is expected to occur in the Downtown area. Most of the office growth is expected in the Downtown and Northeast areas. Research and development and industrial growth would be limited to the east side area of San Carlos. The City does not propose to annex or de-annex any areas of the SOI as part of the proposed project.

While the proposed 2045 General Plan Reset does not prohibit development opportunities outside of anticipated redevelopment areas, it does require the City to plan carefully for balanced growth. The Land

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<sup>17</sup> City of San Carlos, October 2022, City of San Carlos Focused General Plan Update Draft Environmental Impact Report SCH# 2021120442, [https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W\\_6WSLGBNyxK0vcg\\_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0](https://files.ceqanet.opr.ca.gov/274858-2/attachment/rVEOuZTNVVoYZXU0Kz3K8IS6u3pMHGz3W_6WSLGBNyxK0vcg_uP3hfallRKZntg1o3Rhb-VjtJHIF12V0), accessed November 4, 2024.

## LAND USE AND PLANNING

Use (LU) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to land use and planning, including established communities. The following General Plan goals, policies, and action would serve to minimize potential adverse impacts related to established communities:

- **Goal LU-1:** Ensure a sustainable land use pattern.
  - **Policy LU-1.3:** Ensure that development within the TOD corridor maintains and improves the mobility of people and vehicles along and across the corridor.
  - **Policy LU-1.4:** Establish and support the El Camino Real/Caltrain multimodal TOD corridor for the purpose of the mobility of people and vehicles along and across the corridor.
- **Goal LU-3:** Promote connectivity and provide retail and services within walking distance of homes and employment areas.
  - **Policy LU-3.9** Promote development opportunities for regular physical activity by locating residential developments near services.
  - **Policy LU-3.10** Encourage the creation of safe, walkable environments that include elements such as wide, smooth sidewalks, good lighting, safe crosswalks, clear signage, curb bulb-outs, curb cuts, street furniture and trees and traffic-calming measures which allow people of all ages and abilities to exercise and safely access public transportation, community centers and schools and goods and services.
  - **Policy LU-3.11** In addition to public sidewalks require internal linkages in between retail developments.
- **Goal LU-4:** Ensure that any annexation of lands occurs in an orderly and systematic manner and adheres to all City goals, policies, and standards.
  - **Policy LU-4.2:** Annexation of all or portions of unincorporated residential areas shall only be permitted when public services and facilities meeting City standards are available to the lands proposed for inclusion in the city. All streets, sewage and drainage systems and police and fire protection must meet City standards. In no case shall the city tax- payer be burdened with paying for additional services for newly annexed lands. Funds for these services shall be generated through property tax revenue, the establishment of special assessment districts or they shall be paid for by the developer/property owner.
  - **Policy LU-4.3:** Annexation of undeveloped parcels shall be in substantial compliance with the following criteria:
    - a. The parcels are contiguous to parcels located in the City of San Carlos and contiguous or provisions have been made to become contiguous to city streets.
    - b. Require minimum lot size in hillside areas considered for subdivision or annexation to be larger than lots on flat areas to minimize slope instability, erosion and drainage impacts. Lots shall meet, or shall be merged to meet, the minimum lot size established in the subdivision ordinance.
    - c. Parcels with development potential of five or more lots shall cluster single-family detached homes to the degree feasible. In such cases the density may not exceed the density permitted by the lot size standards of the San Carlos Subdivision Ordinance. Further, the provisions related to portions of the development which must remain ungraded shall apply. Only the lot size requirements may vary. In such cases, the minimum lot size shall be 10,000 square feet.

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- **Policy LU-4.5:** Annexation of developed parcels shall be in substantial compliance with the following criteria:
  - a. The parcels are contiguous to parcels located in the City of San Carlos and contiguous to city streets.
  - b. The parcels are connected to the city's sanitary sewer system or can be connected to the city's sewer to the satisfaction of the City Engineer.
  - c. The structures on the parcels shall comply with the Building Codes in effect at the time the structures were constructed. A Code Compliance evaluation prepared by a licensed Civil Engineering or Architect shall be submitted to the San Carlos Building Department for review and approval prior to annexation.
- **Policy LU-4.7:** Prior to annexation of parcels, public services and facilities meeting City standards shall be installed or provisions for their installation shall have been made to the satisfaction of the City Engineer. Public services and utilities include:
  - a. Construction and acceptance of improvements shall be completed prior to issuance of Building Permits or sewer connections.
  - b. Construction of streets meeting City subdivision street standards from the terminus of city streets currently meeting City standards to and throughout the subdivision. Where possible and appropriate and subject to environmental, health and safety considerations, rural road standards shall apply. Assessment districts may be used by the developer for installation of portions of the street which is the responsibility of the owner of abutting unimproved lands at the time their development.
- **Policy LU-4.8:** Annexation of parcels shall be in compliance with City General Plan policies.
- **Policy LU-4.9:** An environmental analysis under the provisions of the California Environmental Quality Act and a fiscal impact analysis shall be conducted.

Because the proposed project includes the policies above and does not propose any physical barriers, implementation of the proposed project would not physically divide an established community. Impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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LAND-2	The proposed project would not 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.
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### Land Use Plans, Policies, and Regulations

While the proposed 2045 General Plan Reset is the primary planning document for the City of San Carlos and the proposed update is intended to ensure consistency between the General Plan, Zoning Ordinance, and federal and State laws, and with the updated buildout projections, implementation of the proposed project has the potential to conflict with “land use” plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. For the purposes of this EIR a “land use” plan is a policy or regulation that addresses how land is used. The following discusses the proposed

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project and its relationship to the land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect as listed in Section 4.10.1.1, *Regulatory Framework*.

### *Cortese-Knox Act*

The San Carlos SOI is regulated by the San Mateo County LAFCo and its purpose, among others, to discourage urban sprawl. Any proposed jurisdictional boundary changes, including annexations and detachments of territory to and/or from the City, is subject to the San Mateo County LAFCo review and approval. The San Mateo County LAFCo also must review any contractual service agreements and determine the SOI. The City does not propose to annex or de-annex any areas of the SOI as part of the proposed project. However, annexation proposals could occur during the buildout horizon of the proposed 2045 General Plan Reset.

As discussed in impact discussion LAND-1, the Land Use (LU) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to land use and planning. In addition to the General Plan goals, policies, and actions listed in impact discussion AES-1, the following General Plan goal, policies, and action would serve to minimize impacts from annexations and support the purpose of the San Mateo LAFCo to encourage the orderly growth of local communities, discourage urban sprawl, and assure efficient local government service:

- **Goal LU-4:** Ensure that any annexation of lands occurs in an orderly and systematic manner and adheres to all City goals, policies, and standards.
  - **Policy LU-4.1:** To the extent not inconsistent with this General Plan and until such time as the City approves an Annexation Ordinance, the annexation policies of the 1992 General Plan as amended by the August 13, 2001 (Resolution 2001-115, Exhibit B) Amendment to the San Carlos General Plan, shall apply to annexation requests. Policies 4.2 through 4.10 below are the Policy intent for the Annexation Ordinance.
  - **Policy LU-4.4** Substandard, undeveloped parcels which do not meet the lot size standards of the City's Subdivision Ordinance will not be supported for annexation to the city.
  - **Policy LU-4.6** Parcels proposed for annexation to the City shall be prezoned consistent with the following unless an application for a different prezoning is initiated and processed
    - a. Undeveloped Residential Parcels.  
Parcels with development potential of five or more lots shall be prezoned to Planned Development with minimum RS-3 development standards prior to approval of a tentative subdivision map.  
Parcels with development potential of less than five lots shall be prezoned RS-3.
    - b. Developed residential parcels and parcels with development potential for nonresidential use shall be prezoned consistent with surrounding and/or like zoning district classifications which represent uses intended for the property.
  - **Policy LU-4.10** Allow single existing developed properties which meet all annexation policies, with the exception of minimum lot size requirements, to be considered for annexation and in no circumstances shall such properties be allowed to further subdivide.
  - **Action LU-4.1** Amend the Municipal Code to codify annexation standards for residential, commercial/industrial and other uses.

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The proposed project acknowledges that the City will follow adopted San Mateo County LAFCo policies to review proposed SOI changes and annexation requests. Accordingly, the proposed project would not conflict with or be inconsistent with the San Mateo County LAFCo policies, and the impact would be *less than significant*.

### *Plan Bay Area*

While ABAG's *Plan Bay Area 2050* does not override local land use control, it provides guidance to the local agencies such as San Carlos on how future development can be consistent with the State's GHG and VMT reduction goals. This includes constructing more infill development in downtowns and centers in close proximity to jobs and services. The Land Use (LU) Element and Circulation and Scenic Highways (CSH) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to land use and planning. In addition to the General Plan goals, policies, and actions previously identified, the following General Plan goals, policies, and action would serve to minimize impacts from conflicts with *Plan Bay Area*:

- **Goal LU-1:** Ensure a sustainable land use pattern.
  - **Policy LU-1.1:** Recognize Planning Areas 1, 2, and 3 as the city's Transit Oriented Development (TOD) corridor.
  - **Policy LU-1.5:** Support land use patterns in the TOD corridor that will attract and serve riders of public transit.
  - **Policy LU-1.8:** As San Carlos' Climate Action Plan is updated over time, continue to include land use goals and measures in the Plan that contributes to a reduction in greenhouse gas emissions.
  - **Policy LU-1.11:** Preserve existing open space by supporting urban infill.
  - **Action LU-1.2:** Include in the Transportation Demand Management Ordinance a requirement that new office development over a certain size include showers and safe and secure bike racks to encourage employees to bicycle to work.
- **Goal LU-3:** Promote connectivity and provide retail and services within walking distance of homes and employment areas.
  - **Policy LU-3.6:** Locate Neighborhood Hubs in areas ½-mile or greater from existing neighborhood-serving retail and/or another Neighborhood Hub.
- **Goal CSH-3:** Maintain a street and highway system which accommodates future growth while maintaining acceptable levels of service.
  - **Policy CSH-3.4** Support Smart Growth and Sustainability principles to reduce travel time from housing to jobs, provide affordable transportation to all members of the community, allow compact mixed-use development and decrease dependency on automobiles.
- **Goal CSH-6:** Integrate transportation and land use.
  - **Policy CSH-6.1:** Bicycling and walking facilities should be incorporated into all new development projects to the maximum extent feasible.
  - **Policy CSH-6.2:** Support transit oriented development with mixed, dense land use that reduces the need to travel and that is linked to good transit. The City shall work with local, regional, and State representatives to encourage the support and funding of transit-oriented development projects.



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In addition to the General Plan goals, policies, and actions listed above, see Chapter 4.2, *Air Quality*, Chapter 4.5, *Energy*, and Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR for complete lists of General Plan goals, policies, and actions that would minimize conflict with the goals of ABAG's *Plan Bay Area*. Accordingly, the proposed project would not conflict with or be inconsistent with *Plan Bay Area 2050*, resulting in a *less-than-significant* impact.

### Non-Land Use Plans, Policies, and Regulations

Plans, policies, and regulations concerning a wide range of topics can also have direct and indirect effects on land use decision-making. The proposed project's potential to conflict with other applicable plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect are discussed in detail in the other environmental topic chapters of this Draft EIR. Specifically, these discussions are in Chapter 4.2, *Air Quality*; Chapter 4.3, *Biological Resources*; Chapter 4.4, *Cultural Resources*; Chapter 4.7, *Greenhouse Gas Emissions*; Chapter 4.8, *Hazards and Hazardous Materials*; Chapter 4.9, *Hydrology and Water Quality*; Chapter 4.11, *Noise*; Chapter 4.13, *Population and Housing*; Chapter 4.14, *Public Services*; Chapter 4.15, *Transportation*; Chapter 4.16, *Tribal Cultural Resources*, Chapter 4.17, *Utilities and Service Systems*; and Chapter 4.18, *Wildfire*. Some of these key regulations include:

- **Air Quality.** Bay Area Air Quality Management District (BAAQMD) has prepared several plans to attain the National ambient air quality standards (AAQS) and California AAQS. The air quality management plans prepared by BAAQMD provide the framework for San Francisco Bay Area Air Basin to achieve attainment of the State and federal AAQS.
- **Biological Resources.** The federal Endangered Species Act (ESA) and California ESA protects plants and animals that are listed as endangered or threatened by the United States Fish and Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish and Wildlife. The Migratory Bird Treaty Act protects migratory birds, any of their parts, eggs, and nests. The Bald and Golden Eagle Protection Act of 1940, as amended, provides for the protection of bald eagles and golden eagles. The federal Clean Water Act (CWA) and State CWA protect habitat for animals and plants. The Native Plant Protection Act of 1977 was created with the intent to “*preserve, protect and enhance rare and endangered plants in this State.*”
- **Cultural and Tribal Cultural Resources.** The National Historic Preservation Act defines the responsibilities of federal agencies to protect and preserve Historic Properties. The American Indian Religious Freedom Act and the Native American Graves Protection and Repatriation Act of 1990 protect Native American artifacts. California Government Code Section 65352.3-5, formerly known as SB 18, and Assembly Bill 52 are both intended to protect Native American resources as well.
- **Greenhouse Gas Emissions and Vehicle Miles Traveled.** *Plan Bay Area 2050* provides guidance to reduce VMT and thus reduce GHG emissions to meet the State's goals.
- **Airport Hazards.** The Airport Land Use Compatibility Plan (ALUCP) covering all three public airports in San Mateo County was approved by the City/County Association of Governments of San Mateo County (C/CAG) in December 1996. The C/CAG has since adopted updated ALUCPs for San Francisco International Airport (November 2012), Half Moon Bay Airport (September 2014), and San Carlos Airport (October 2015). The updated ALUCPs describe a series of land use safety and compatibility

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zones and associated guidelines for development around each airport that are intended to prevent development that is incompatible with airport operations.

- **Hydrology and Water Quality.** The federal and State CWAs include regulations for protecting water quality. The City of San Carlos is within the jurisdiction of the San Francisco Bay RWQCB (Region 2). The San Francisco Bay RWQCB addresses region-wide water quality issues through the creation and triennial update of the *Water Quality Control Plan* for the San Francisco Bay Region (Basin Plan).
- **Natural Hazards.** The City of San Carlos adopted a *Multijurisdictional Local Hazard Mitigation Plan* (MLHMP) in 2021. The MLHMP focuses on protecting the community from risks associated with hazards such as earthquakes, floods, fires, hazardous materials and other hazards. The MLHMP analyzes these hazards and the risks they pose and includes goals and mitigation strategies to establish what measures will be undertaken to reduce these risks to levels determined by the City of San Carlos to be reasonable.
- **Population and Housing.** ABAG is the official comprehensive planning agency for the San Mateo County area and is responsible for taking the overall Regional Housing Needs Allocation provided by the State and preparing a formula for allocating that housing need by income level across its jurisdiction.
- **Utilities and Service Systems.** The National Pollutant Discharge Elimination System permit program was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems.

A complete list and description of the applicable non-land-use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect, is included in the individual chapters of this Draft EIR listed previously.

In summary, the proposed 2045 General Plan Reset is the overriding planning document for the City and, because the proposed General Plan update involves amending the current General Plan, the impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>LAND-3</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative land use impacts in the area.</b>
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The geographic context for the cumulative land use and planning impacts would occur from future development under the proposed project combined with impacts of development on lands adjacent to the city. As discussed in impact discussions LAND-1 and LAND-2, the proposed project would not divide an established community or conflict with established plans, policies, and regulations. The proposed project would not conflict with any State, regional, or local land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Future development that would be allowed under the proposed project would not create substantial land use impacts. Development would likely continue to occur in the surrounding cities and the unincorporated areas of

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San Mateo County. However, such development would largely be taking place in already urbanized areas and would not require development or demolition that would create land use conflicts or divide established communities. Therefore, the proposed project would not result in a cumulatively considerable contribution to cumulative impacts related to land use changes, and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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## 4.11 NOISE

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to noise, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.11.1 ENVIRONMENTAL SETTING

#### 4.11.1.1 NOISE AND VIBRATION FUNDAMENTALS

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. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” The following are brief definitions of terminology used in this section:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Hertz (Hz).** A unit of frequency of change in state or cycle in a sound wave. The nearly universal usage is one (complete) cycle in one second.
- **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 ( $L_{eq}$ ); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the  $L_{eq}$  metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **$L_{max}$ .** 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); that 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

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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 from 7:00 pm to 10:00 pm and 10 dB from 10:00 p.m. to 7:00 a.m. For general community/environmental noise, CNEL and  $L_{dn}$  values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive, that is, higher than the  $L_{dn}$  value). As a matter of practice,  $L_{dn}$  and CNEL values are interchangeable and are treated as equivalent in this assessment.
- **Noise-Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.
- **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).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second ( $1 \times 10^{-6}$  in/sec).

## 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. The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are “felt” more like 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. Because 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 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.

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 “ $L_n$ ” values are typically used to demonstrate compliance for stationary noise sources with a city’s noise ordinance, as discussed subsequently.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law and the City require that, for planning purposes, an artificial dB 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 but only adds a 10 dBA increment between 10:00 p.m. and 7:00 a.m. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher).

## Noise Exposure and Community Noise

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise

## NOISE

sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level ( $L_{eq}$ ) and the average daily noise levels/community noise equivalent level ( $L_{dn}$ /CNEL). The  $L_{eq}$  is a measure of ambient noise during a specific time period, while the  $L_{dn}$  and CNEL are measures of community noise over a 24-hour time period.

### Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL or  $L_{dn}$  is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Interior noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response is expected. An increase of 5 dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.



## Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA, averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

## Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. Both the  $L_{dn}$  and CNEL as measures of noise have been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources.

## 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 4.11-1, *Typical Noise Levels*, shows typical noise levels from familiar noise sources.

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**TABLE 4.11-1 TYPICAL NOISE LEVELS**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of Physical Discomfort	120+	Onset of physical discomfort
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 Feet	100	
Gas Lawn Mower at 3 feet	90	
Diesel Truck at 50 feet, at 50 mph	80	Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime	70	Vacuum Cleaner at 10 feet
Commercial Area	60	Normal Speech at 3 feet
Heavy Traffic at 300 feet	50	Large Business Office
Quiet Urban Daytime	40	Dishwasher Next Room
Quiet Urban Nighttime	30	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	20	Library
Quiet Rural Nighttime	10	Bedroom at Night, Concert Hall (Background)
	0	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation, May 13, 2011, *I-80 Davis OGAC Pavement Noise Study*, <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/davis-noise-study-12yr-report-may2011-a11y.pdf>, accessed October 4, 2022.

## Vibration Fundamentals

Vibration is a trembling, quivering, or oscillating motion of 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, sea waves, landslides, or man-made as from explosions, the action of heavy machinery or heavy vehicles such as trains. Both natural and man-made vibration may be continuous such as from operating machinery, or transient as from an explosion.

Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors or stacked dishes. The rattling sound can give rise to ex-aggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where ground-borne vibration approaches perceptible levels, this rattling phenomenon may

also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile-driving and vibratory compaction equipment typically generates the highest construction related ground-borne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess ground-borne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans.

Structural damage can be classified as cosmetic only, such as minor cracking of building elements, or may threaten the integrity of the building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher and there is no general consensus as to what amount of vibration may pose a threat for structural damage to the building. Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

## Psychological and Physiological Effects of Vibration

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 or millimeters per second. Typically, particle velocity (measured in inches or millimeters per second) and/or acceleration (measured in gravities) are used to describe vibration. Table 4.11-2, *Human Reaction to Typical Vibration Levels*, presents the human reaction to various levels of peak particle velocity.

**TABLE 4.11-2 HUMAN REACTION TO TYPICAL VIBRATION LEVELS**

Vibration Level PPV (in/sec)	Human Reaction	Effect on Buildings
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Threshold at which there is a risk of damage to fragile buildings with no risk of damage to most buildings
0.25	Strongly perceptible to severe	Threshold at which there is a risk of damage to historic and some old buildings
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential structures
0.5	Severe – vibrations considered unpleasant	Threshold at which there is a risk of damage to new residential and modern commercial/industrial structures

Note: in/sec = inches per second

Source: California Department of Transportation, 2020, Transportation and Construction Vibration Guidance Manual.

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### 4.11.1.2 REGULATORY FRAMEWORK

#### Federal Regulations

##### *Federal Highway Administration*

Proposed federal or federal-aided highway construction projects at a new location, or the physical alteration of an existing highway that significantly changes the horizontal or vertical alignment or increases the number of through-traffic lanes, require an assessment of noise and consideration of noise abatement per 23 Code of Federal Regulations Part 772, “Procedures for Abatement of Highway Traffic Noise and Construction Noise.” The Federal Highway Administration (FHWA) has adopted noise abatement criteria for sensitive receivers—such as picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals—when “worst-hour” noise levels approach or exceed 67 dBA  $L_{eq}$ .<sup>1</sup>

##### *Federal Transit Administration*

The Federal Transit Administration (FTA) has identified construction noise thresholds in the *Transit Noise and Vibration Impact Assessment Manual*<sup>2</sup> that limit daytime construction noise to 80 dBA  $L_{eq}$  at residential land uses and to 90 dBA  $L_{eq}$  at commercial and industrial land uses. The FTA also provides damage criteria during construction vibration exposure. The criteria is summarized in Table 4.11-3, *Construction Vibration Damage Criteria*.

**TABLE 4.11-3 CONSTRUCTION VIBRATION DAMAGE CRITERIA**

Building/Structural Category	PPV (in/sec)	Approximate $L_v$ <sup>a</sup>
Reinforced-concrete, steel or timber (no plaster)	0.5	102
Engineered concrete and masonry (no plaster)	0.3	98
Non-engineered timber and masonry buildings	0.2	94
Buildings extremely susceptible to vibration damage	0.12	90

Note:

a. Root-mean square velocity in decibels, VdB re 1 micro-in/sec. Vibration Decibel (VDdB) = A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is one microinch per second ( $1 \times 10^{-6}$  in/sec).

Source: United States Department of Transportation Federal Transit Administration, 2018, *Transit Noise and Vibration Impact Assessment Manual*.

The FTA has identified vibration impact criteria for sensitive buildings, residences, and institutional land uses near rail transit and railroads (Table 4.11-4, *FTA Groundborne Vibration Impact Criteria*). The thresholds for residences and buildings where people normally sleep (e.g., nearby residences) are 72 VdB for frequent events (more than 70 events of the same source per day), 75 VdB for occasional events

<sup>1</sup> California Department of Transportation, April 2020, *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects*, <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/traffic-noise-protocol-april-2020-a11y.pdf>, accessed October 4, 2022.

<sup>2</sup> Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, FTA Report No. 0123, September 2018.

(30 to 70 vibration events of the same source per day), and 80 VdB for infrequent events (less than 30 vibration events of the same source per day).

**TABLE 4.11-4 FTA GROUNDBORNE VIBRATION IMPACT CRITERIA**

Land Use Category	Impact Levels (VdB re 1 micro-in/sec)		
	Frequent Events <sup>a</sup>	Occasional Events <sup>b</sup>	Infrequent Events <sup>c</sup>
Category 1: Buildings where vibration would interfere with interior operations	65 VdB <sup>d</sup>	65 VdB <sup>d</sup>	65 VdB <sup>d</sup>
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

Notes: Vibration Decibel (VdB) = A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is one microinch per second ( $1 \times 10^{-6}$  in/sec).

a. "Frequent Events" is defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.

b. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.

c. "Infrequent Events" is defined as fewer than 30 vibration events per day. This category includes most commuter rail systems.

d. This limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.

Source: US Department of Transportation Federal Transit Administration, 2018, *Transit Noise and Vibration Impact Assessment Manual*.

### *United States Environmental Protection Agency*

In addition to FHWA standards, the United States Environmental Protection Agency (USEPA) has identified the relationship between noise levels and human response. The USEPA 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 a  $L_{eq}$  of 55 dBA and interior levels at or below 45 dBA. These levels are relevant to planning and design and useful for informational purposes, but they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community; therefore, they are not mandated.

The USEPA also has 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.<sup>3</sup>

### *United States Department of Housing and Urban Development*

The United States Department of Housing and Urban Development (HUD) has set the goal of 65 dBA  $L_{dn}$  as a desirable maximum exterior standard for residential units developed under HUD funding. (This level is also generally accepted within the State of California.) Although HUD does not specify acceptable

<sup>3</sup> United States Environmental Protection Agency. 1978, November. Protective Noise Levels. EPA 550/9-79-100. (Condensed version of 1971 and 1974 documents.)

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interior noise levels, standard construction of residential dwellings typically provides 20 dBA or more of attenuation with the windows closed. Based on this premise, the interior  $L_{dn}$  should not exceed 45 dBA.<sup>4</sup>

### State 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. These suggested noise and land use compatibility standards provide local governments with a basis for setting limits appropriate to their jurisdiction.<sup>5</sup>

#### *California Building Code*

The State of California provides a minimum standard for building design through Title 24, Part 2, of the California Code of Regulations (CCR), commonly referred to as the “California Building Code” (CBC). The CBC is updated every three years. The noise limit is a maximum interior noise level of 45 dBA  $L_{dn}$ /CNEL. Where exterior noise levels exceed 60 dBA  $L_{dn}$ /CNEL, a report must be submitted with the building plans describing the noise control measures that have been incorporated into the design of the project to meet the noise limit. The California Governor’s Office of Land Use and Climate Innovation (formerly the Office of Planning and Research) guidelines require the General Plan to facilitate the implementation of the CBC noise insulation standards. The noise metric is evaluated as either the day-night average sound level ( $L_{dn}$ ) or the community noise equivalent level (CNEL), whichever is consistent with the noise element of the local general plan.

The State of California’s noise insulation standards for non-residential uses are codified in CCR, Title 24, Part 11, California Green Building Standards Code (CALGreen). CALGreen noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (Section 5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65 dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA  $L_{eq(1hr)}$ .

#### *California Department of Transportation*

The California Department of Transportation (Caltrans) recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards. A conservative vibration limit of 0.25 to 0.30 in/sec PPV has been used for older buildings that are found to be structurally sound but cosmetic damage to plaster ceilings or walls is a major concern. For historic buildings or buildings

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<sup>4</sup> United States Department of Housing and Urban Development. 1985, March. Noise Guidebook: A Reference Document for Implementing the Department of Housing and Urban Development's Noise Policy.

<sup>5</sup> Governor’s Office of Planning and Research. 2020. State of California General Plan 2020 Guidelines.

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that are documented to be structurally weakened, a conservative limit of 0.08 in/sec PPV is often used to provide the highest level of protection. All of these limits have been used successfully and compliance with these limits has not been known to result in appreciable structural damage. All vibration limits referred to herein apply on the ground level and take into account the response of structural elements (i.e., walls and floors) to groundborne excitation. These thresholds are summarized in Table 4.11-5, *Caltrans' Vibration Threshold Criteria for Building Damage*, and Table 4.11-6, *Caltrans' Vibration Threshold Criteria for Human Response*.

**TABLE 4.11-5 CALTRANS' VIBRATION THRESHOLD CRITERIA FOR BUILDING DAMAGE**

Structural Integrity	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile Buildings	0.2	0.1
Historic and some older buildings	0.50	0.25
Older residential structures	0.50	0.3
New residential structures	1.00	0.5
Modern industrial and commercial structures	2.00	0.5

Notes: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.  
PPV (in/sec) = peak particle velocity (inches per second).

Source: California Department of Transportation, 2020, *Transportation and Construction Vibration Guidance Manual*.

**TABLE 4.11-6 CALTRANS' VIBRATION THRESHOLD CRITERIA FOR HUMAN RESPONSE**

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.00	0.4

Notes: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.  
PP V(in/sec) = peak particle velocity (inches per second).

Source: California Department of Transportation, 2020, *Transportation and Construction Vibration Guidance Manual*.

### *Division of Aeronautic Noise Standards*

CCR Title 21 sets forth the State's airport noise standards.<sup>6</sup> In the findings described in Section 5006, the standard states the following: "A level of noise acceptable to a reasonable person residing in the vicinity of an airport is established as a CNEL value of 65 dB for purposes of these regulations. This criterion level

<sup>6</sup> California Code of Regulations Airport Noise Standards, Title 21, Public Works Division 2.5, Division of Aeronautics (Department of Transportation), Chapter 6 Noise Standards, Article 1. General.

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has been chosen for reasonable persons residing in urban residential areas where houses are of typical California construction and may have windows partially open. It has been selected with reference to speech, sleep, and community reaction.” Based on this finding, the airport noise standard as defined in Section 5012 is set at a CNEL of 65 dBA.

### *Assembly Bill 1307*

Signed into law on September 7, 2023, Assembly Bill (AB) 1307 amends California Environmental Quality Act (CEQA) and adds Public Resources Code (PRC) Section 21085. Pursuant to PRC Section 20185 for residential projects, the effects of noise generated by project occupants and their guests on human beings is not a significant effect on the environment. Accordingly, the noise from residential development projects is limited to construction noise, noise from the operation of the house (e.g., heating, ventilation, and air conditioning equipment), and increases in transportation noise from vehicle trips generated from the residential project.

## Local Regulations

### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.11.3, *Impact Discussion*.

### *City of San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to noise as follows:

- Chapter 9.30, *Noise Control*, declares that the policy of the City is to protect the peace, health and safety of its citizens from unnecessary and unreasonable noises produced by any machine, person or device. It shall also be the City’s policy to continuously evaluate the noise levels specified in the body of this chapter and adjust them as quieter equipment becomes available or as demanded by State and Federal requirements.
  - Section 9.30.030, *Basic Noise Regulation*, states that, except as otherwise permitted under this chapter, no person shall cause and no property owner shall permit, as to property owned by him, a noise produced by any person, amplified sound or device, or any combination thereof in excess of ten dBA above the local ambient to emanate from any property, public or private, as measured at a distance of forty-nine feet beyond the property line.
  - Section 9.30.070, *Exempt Activities*, lists the following noise-generating activities that exempt from the provisions of SCMC Chapter 9.30:
    - Transportation facilities, such as freeways, airports, buses and railroads;



- Construction Activities; such activities, however, shall be limited to the hours of eight a.m. to five p.m., Monday through Friday and nine a.m. to five p.m. on Saturday, Sunday and holidays;
  - Home Workshop and Gardening Equipment; such activities, however, shall be limited to the hours of eight a.m. to sunset, Monday through Friday and ten a.m. to sunset on Saturday. No construction noise-related activities can occur on Sundays and certain holidays.
  - Public works and public utilities activities, which shall be limited to the hours set forth under Subsection B above, except for emergency situations;
  - Emergency vehicles;
  - Solid waste pickup.
- Section 18.21.050-A, *Noise Limits*, prohibits use or activity that create noise levels that exceed the established standards. The maximum allowable noise levels specified in SCMC Table 18.21.050-A, *Noise Limits*, (see Table 4.11-10, *Non-Transportation Noise Standards*) do not apply to noise generated by automobile traffic or other mobile noise sources in the public right-of-way. The maximum allowable noise levels in Table 4.11-10 (SCMC Table 18.21.050-A, *Noise Limits*) shall be adjusted according to the following provisions, with no more than one increase in the maximum permissible noise level applied to the noise generated on each property:
  - Ambient Noise. If the ambient noise level at a noise-sensitive use is 10 dBA or more below the standard, the allowable noise standard shall be decreased by 5 dBA.
  - Duration. The maximum allowable noise level ( $L_{50}$ ) shall be increased as follows to account for the effects of duration:
    - Noise that is produced for no more than a cumulative period of fifteen minutes in any hour ( $L_{25}$ ) may exceed the noise limit by 5 dBA; and
    - Noise that is produced for no more than a cumulative period of five minutes in any hour ( $L_8$ ) may exceed the noise limits by 10 dBA;
    - Noise that is produced for no more than a cumulative period of one minute in any hour ( $L_2$ ) may exceed the noise limits by 15 dBA.
  - Character of Sound. If a noise contains a steady audible tone or is a repetitive noise (such as hammering or riveting) or contains music or speech conveying informational content, the maximum allowable noise levels shall be reduced by 5 dBA.
  - Prohibited Noise. Noise for a cumulative period of thirty minutes or more in any hour which exceeds the noise standard for the receiving land use is prohibited.
- Section 18.21.050-B, *Noise Exposure*, includes SCMC Table 18.21.050-B (see Table 4.11-7, *Noise Exposure—Land Requirements and Limitations*) which describes the requirements and limitations of various land uses within the listed day/night average sound level ( $L_{dn}$ ) ranges.

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**TABLE 4.11-7 NOISE EXPOSURE—LAND REQUIREMENTS AND LIMITATIONS**

Land Use	Day/Night Average Sound Level (L <sub>dn</sub> )	Requirements and Limitations
Residential <sup>a</sup> and Other Noise-Sensitive Uses (e.g., Schools, Hospitals, and Churches)	Less than 60	Satisfactory
	60 to 75	Acoustic study and noise attenuation measures required
	Over 75	Acoustic study and noise attenuation measures required
Auditoriums, Concert Halls, Amphitheaters	Less than 70	Acoustic study and noise attenuation measures required
	Over 70	Not Allowed
	Less than 70	Satisfactory
Commercial and Industrial	70 to 80	Acoustic study and noise attenuation measures required
	Over 80	Acoustic study and noise attenuation measures required
	Less than 65	Satisfactory
Outdoor Sports and Recreation, Parks	65 to 80	Acoustic study and noise attenuation measures required; avoid uses involving concentrations of people or animals
	Over 80	Limited to open space; avoid uses involving concentrations of people or animals
	Over 80	Limited to open space; avoid uses involving concentrations of people or animals

Note:

a. New residential development in noise impacted areas are subject to the following noise levels:

- For new single-unit residential development, maintain a standard of 60 L<sub>dn</sub> for exterior noise in private use areas.
- For new multi-unit residential development, maintain a standard of 65 L<sub>dn</sub> in community outdoor recreation areas. Noise standards are not applied to private decks and balconies and shall be considered on a case-by-case basis in the MU-DC District.
- Where new residential units (single and multifamily) would be exposed to intermittent noise levels generated during train operations, maximum railroad noise levels inside homes shall not exceed forty-five dBA in bedrooms or fifty-five dBA in other occupied spaces. These single-event limits are only applicable where there are normally four or more train operations per day.

Source: City of San Carlos Municipal Code, Chapter 18.21 Performance Standards, revised 1/24.

- Section 18.21.050-C, *Acoustic Study*, permits the Director to require an acoustic study for any proposed project that could cause any of the following:
  - Create an inconsistency with the noise requirements of the San Carlos Airport as defined in Section 18.21.150, San Carlos Airport land use compatibility plan consistency;
    - Where applicable, noise attenuation measures may be required;
  - Cause noise levels to exceed the limits in Table 18.21.050-A (Table 4.11-10, *Non-Transportation Noise Standards*);
  - Create a noise exposure that would require an acoustic study and noise attenuation measures listed in Table 18.21.050-B (Table 4.11-7), *Noise Exposure-Land Use Requirements and Limitations*;
  - Cause the L<sub>dn</sub> at noise-sensitive uses to increase three dBA or more.
- Section 18.21.050-D, *Establishing Ambient Noise*, states that when the Director has determined that there could be cause to make adjustments to the standards, an acoustical study shall be performed to establish ambient noise levels. In order to determine if adjustments to the standards should be made either upwards or downwards, a minimum twenty-four-hour-duration noise measurement shall be conducted. The noise measurements shall collect data utilizing noise metrics that are consistent with the noise limits presented in SCMC Table 18.21.050-A, e.g., L<sub>max</sub> (zero minutes), L<sub>02</sub> (one minute), L<sub>08</sub> (five minutes), L<sub>25</sub> (fifteen minutes) and L<sub>50</sub> (thirty minutes). An arithmetic average of these ambient noise levels during the three quietest hours shall be made to demonstrate that the ambient noise levels are regularly ten or more decibels below the respective noise

standards. Similarly, an arithmetic average of ambient noise levels during the three loudest hours should be made to demonstrate that ambient noise levels regularly exceed the noise standards.

- Section 18.21.050-E, *Noise Attenuation Measures*, states that any project subject to the acoustic study requirements of subsection C of this section may be required as a condition of approval to incorporate noise attenuation measures deemed necessary to ensure that noise standards are not exceeded.
  - New noise-sensitive uses (e.g., schools, hospitals, churches, and residences) shall incorporate noise attenuation measures to achieve and maintain an interior noise level of forty-five dBA.
  - Noise attenuation measures identified in an acoustic study shall be incorporated into the project to reduce noise impacts to satisfactory levels.
  - Emphasis shall be placed upon site planning and project design measures. The use of noise barriers shall be considered and may be required only after all feasible design-related noise measures have been incorporated into the project.
- Section 18.21.050-F, *Airport Land Use Compatibility Plan Consistency*, states that where required, conformance with applicable airport land use compatibility plan standards, as described in Section 18.21.150, San Carlos Airport land use compatibility plan consistency, is required.
- Section 18.21.060, *Vibration*, prohibits the production of vibration that is transmitted through the ground and is discernible without the aid of instruments by a reasonable person at the lot lines of the site. Vibrations from temporary construction, demolition, and vehicles that enter and leave the subject parcel (e.g., construction equipment, trains, trucks, etc.) are exempt from this standard.
- Section 18.21.150-C, *Airport Noise Evaluation and Mitigation*, requires all proposed development projects, alterations, or changes of use subject to the ALUCP to be reviewed for consistency with the noise policies of the ALUCP, including the aviation easement requirements of San Carlos ALUCP Noise Policy 7. Uses listed as “conditionally compatible” in the ALUCP will be required to mitigate impacts to comply with the interior noise standards established in the ALUCP or General Plan, whichever is more restrictive.

### 4.11.1.3 EXISTING CONDITIONS

The City's existing General Plan Noise Element identifies the primary contributors to the city's noise environment as coming from motor vehicles and aircraft overflights. The San Carlos Airport is located in the eastern area of the city, east of Hwy 10, near Holly Avenue interchange. Other sources of community noise include rail activities and commercial and industrial land uses. One rail line operated by Caltrain runs parallel to El Camino Real and Old County Road through the city. The majority of commercial and industrial land uses within San Carlos are located east-northeast of El Camino Real.

### Sensitive Receptors

Certain land uses, such as residences, schools, and hospitals, are particularly sensitive to noise and vibration. Sensitive receptors include residential uses, retirement homes, hotel/motels, schools, libraries, community centers, places of public assembly, daycare facilities, churches and hospitals in the City of San Carlos. 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, working

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from home, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not particularly sensitive to noise or vibration.

### Traffic Noise

On-road vehicles represent the most prominent source of noise in the city. Traffic noise levels depend primarily on the speed of the traffic and the volume of trucks. The primary source of noise from automobiles is high-frequency tire noise, which increases with speed. Highways and arterials that traverse San Carlos include HWY 101 along the eastern portion of the City and El Camino Real (SR-82) through the central portion of the City. In addition to these highways, major roadways in San Carlos include Holly Street, San Carlos Avenue, Alameda de Las Pulgas, Brittan Avenue, Crestview Drive, and Edgewood Road. Existing traffic noise conditions were modeled using the FHWA's traffic noise prediction model (FHWA RD-77-108). Average daily traffic (ADT) volumes, vehicle mix (auto, medium-duty truck, heavy-duty truck), speeds, time of day split (day, evening, night), speeds, and number of lanes data were provided by Kittelson and Associates for roadway segments throughout the city. Table 4.11-8, *Existing Traffic Noise Conditions, dBA CNEL*, lists the calculated existing noise levels on roadways at a distance of 50 feet from the nearest travel lane centerline and the distances to the 70 dBA, 65 dBA, and 60 dBA CNEL noise contours.

**TABLE 4.11-8 EXISTING TRAFFIC NOISE, dBA CNEL**

Roadway	Segment		Daily Traffic Volumes	Noise Level at 50 feet (dBA CNEL)	Distance to Noise Contour (feet)		
	From	To			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
El Camino Real	the North	Holly St	18,510	69	44	140	442
El Camino Real	Holly St	San Carlos Ave	19,025	70	45	144	454
El Camino Real	San Carlos Ave	Brittan Ave	19,815	70	48	152	480
El Camino Real	Brittan Ave	Howard Ave	18,170	69	44	139	440
El Camino Real	Howard Ave	the South	18,465	70	45	142	448
Old Country Road	the North	Holly St	11,095	66	19	59	188
Old Country Road	Holly St	Brittan Ave	6,045	63	10	32	102
Old Country Road	Brittan Ave	Howard Ave	10,480	67	25	78	245
Old Country Road	Howard Ave	the South	6,745	65	16	50	158
Industrial Road	the North	Holly St	10,500	67	25	79	251
Industrial Road	Holly St	Brittan Ave	9,615	67	23	73	229
Industrial Road	Brittan Ave	the South	10,855	67	26	82	259
Club Drive	San Carlos Ave	the South	10,530	62	8	26	83
Alameda de Las Pulgas	San Carlos Ave	Brittan Ave	9,465	64	11	36	115
Alameda de Las Pulgas	Brittan Ave	the South	9,980	64	12	38	121

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**TABLE 4.11-8 EXISTING TRAFFIC NOISE, dBA CNEL**

Roadway	Segment		Daily Traffic Volumes	Noise Level at 50 feet (dBA CNEL)	Distance to Noise Contour (feet)		
	From	To			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Holly Street	the West	El Camino Real	17,705	64	14	44	139
Holly Street	El Camino Real	Old Country Rd	7,170	61	6	18	57
Holly Street	Old Country Rd	Industrial Rd	17,310	66	21	66	209
San Carlos Avenue	Club Dr	Alameda de Las Pulgas	3,535	59	4	14	43
San Carlos Avenue	Alameda de Las Pulgas	El Camino Real	14,130	64	11	36	113
Brittan Avenue	the West	Alameda de Las Pulgas	8,310	63	10	32	101
Brittan Avenue	Alameda de Las Pulgas	El Camino Real	7,165	62	9	28	87
Brittan Avenue	Old Country Rd	Industrial Rd	6,205	63	11	34	107
Howard Avenue	the West	El Camino Real	9,350	63	9	29	92
Howard Avenue	Old Country Rd	the East	4,870	62	8	27	84

Source: Federal Highway Administration Highway Traffic Noise Prediction Model based on traffic volumes provided by Kittelson and Associates in 2024. Calculations included in Appendix C, *Noise Data*, of this Draft EIR.

## Rail Noise and Vibration

There are 35 weekday northbound stops a day scheduled and 35 weekday southbound stops a day scheduled at the San Carlos Caltrain Station. In addition to the scheduled stops, Caltrain makes a number of passbys through the city throughout the day. Day-night average noise levels are estimated to range from 67 to 69 dBA  $L_{dn}$  at a distance of 100 feet from the tracks. Due to the grade-separated line, train warning whistles are not sounded frequently in San Carlos but can generate maximum noise levels of approximately 105 dBA at 100 feet.

Trains are considered to be a source of perceptible ground-borne vibration within approximately 50 to 100 feet of the tracks. Ground-borne vibration occurs in areas adjacent to fixed rail lines when railroad trains pass through San Carlos. Ground vibration levels along the railroad corridors are proportional to the speed and weight of the trains as well as the condition of the tracks and train engine and car wheels. Vibration measurements conducted in San Carlos indicate that the acceptable levels occur about 65 feet from the center of the near railroad track for the maximum measured train vibration level and about 55 feet from the center of the near railroad track for typical train passbys.

## San Carlos Airport Noise

Aircraft using San Carlos Airport intermittently contribute to ambient noise levels in the city. This general aviation airport is located east of Highway 101 near the Holly Avenue interchange within the San Carlos city limit. The airport is owned and operated by the County of San Mateo and accommodates almost 400

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based aircraft and a variety of aviation-related businesses, including flight schools. San Carlos Airport is designated as a reliever airport in the National Plan of Integrated Airport Systems (NPIAS). Reliever airports are located in major metropolitan areas and provide general aviation pilots and users with an alternative to congested commercial service airports like San Francisco International Airport. San Mateo County and the San Carlos Pilot's Association promote noise reduction practices by airport users, including avoiding flying over sensitive areas.

Land uses near San Carlos Airport are predominantly industrial and commercial uses compatible with the aircraft noise. Noise from aircraft is audible, but not in excess of 65 dB CNEL. Individual event passes over San Carlos do not produce any additional amount of noise that would cause the existing noise contour configuration to be altered. Jet aircraft to and from the San Jose and San Francisco International Airports generate intermittent noise when passing over the City of San Carlos. Noise generated by these over-flights, although audible and noticeable in quiet areas above other ambient noise sources, do not contribute to daily average noise levels in the city.<sup>7</sup>

### Non-Transportation Noise

Non-transportation sources also contribute to the project area's existing noise environment. Commercial and industrial land uses are located throughout the project area, primarily along key roadways like US 101, El Camino Real, Industrial Road, and San Carlos Avenue. Schools and outdoor park and recreation facilities, and residential land uses generate noise from daily operations of landscaping equipment, stationary sources such as heating, ventilation, and air conditioning (HVAC) equipment, business deliveries, solid waste pickup services, etc. Such sources of noise are considered local sources that only influence the immediate surroundings.

### 4.11.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant noise impact if it would:

- NOISE-1     Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- NOISE-2     Generate excessive groundborne vibration or groundborne noise levels.
- NOISE-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, expose people residing or working in the project area to excessive noise levels.
- NOISE-4     In combination with past, present, and reasonably foreseeable projects, result in cumulative noise impacts in the area.

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<sup>7</sup> City/County Association of Governments of San Mateo County. 2015, October. Comprehensive Land Use Compatibility Plan for the Environs of San Carlos Airport. [https://ccag.ca.gov/wp-content/uploads/2015/11/SQL\\_FinalALUCP\\_Oct15\\_read.pdf](https://ccag.ca.gov/wp-content/uploads/2015/11/SQL_FinalALUCP_Oct15_read.pdf)

## Construction Noise

SCMC Section 9.30.070 exempts construction noise during the hours of eight a.m. to five p.m., Monday through Friday, and nine a.m. to five p.m. on Saturday. However, the City does not have established noise thresholds for construction noise impact analysis. Therefore, the FTA construction noise criterion of 80 dB(A)  $L_{eq(8hr)}$  is used in this analysis to assess construction noise impacts at sensitive receptors. Because this is a programmatic EIR, project-level analysis of construction noise would be speculative and is therefore not presented. Potential future impacts from construction noise are addressed qualitatively and include program-level mitigation measures.

## Stationary Noise

SCMC provides noise standards for non-transportation noise sources in Section 18.21.050, Noise Limits. For non-transportation noise sources that would be analyzed at the project level, pursuant to Section 18.21.050, the exterior noise level limit in residential districts is 55 dB(A)  $L_{50}$  and 70 dBA  $L_{max}$  during daylight hours and 45 dB(A)  $L_{50}$  and 60 dBA  $L_{max}$  during nighttime hours. The interior noise level limit in residential districts is 40 dB(A)  $L_{50}$  and 55 dBA  $L_{max}$  during daylight hours and 30 dB(A)  $L_{50}$  and 45 dBA  $L_{max}$  during nighttime hours.

## Vibration

SCMC Section 18.21.060 considers vibrations from temporary construction, demolition, and vehicles that enter and leave the subject parcel (e.g., construction equipment, trains, trucks, etc.) exempt from the City's standard. However, the City does not have established vibration thresholds for construction noise impact analysis. Therefore, Caltrans' vibration thresholds shown in Table 4.11-3, *Construction Vibration Damage Criteria*, would apply to assess building damage and FTA thresholds shown in Table 4.11-4, *FTA Groundborne Vibration Impact Criteria*, would apply to assess human annoyance. Because this is a programmatic EIR, project-level analysis of construction noise would be speculative and is therefore not presented. Potential future impacts from construction noise are addressed qualitatively and include program-level mitigation measures.

Portions of the project are within the "Conditionally Acceptable" range for residential land uses, according to the San Carlos noise and land use compatibility standards (see Table 4.11-9, *San Carlos Land Use Compatibility for Community Noise Environments*). However, as a result of the Supreme Court decision regarding the assessment of the environment's impacts on projects (*California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, 62 Cal. 4th 369 (No. S 213478) issued December 17, 2015), it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. As a result, while the noise from existing sources is taken into account as part of the baseline condition, the direct effects of exterior noise from nearby noise sources relative to land use compatibility of a proposed project is typically no longer a required topic for impact evaluation under CEQA. Generally, no determination of significance is required except for certain school projects, projects affected by airport noise, and projects that would exacerbate existing conditions (i.e., projects that would have a significant operational impact).

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### 4.11.3 IMPACT DISCUSSION


<b>NOISE-1</b>	<b>The proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</b>
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The City of San Carlos General Plan provides objectives, policies, and implementing actions in Chapter 9, Noise Element, that address land use compatibility with environmental noise levels and to ensure that city residents will be protected from excessive noise intrusion, both now and in the future. The noise standards specified in the Noise Element are a guideline to evaluate the acceptability of the noise levels generated by vehicular traffic and the San Carlos Airport. These standards are used for assessment of long-term traffic- and aircraft-related noise impacts on land uses. The Noise Element also establishes the noise/land use compatibility criteria to be used in determining whether a new use is appropriate within a given noise environment, the criteria is presented in Table 4.11-9, *San Carlos Land Use Compatibility for Community Noise Environments*.

**TABLE 4.11-9 SAN CARLOS LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS**

Land Uses	L <sub>dn</sub> (dBA)						
	55	60	65	70	75	80	85
Single-Family Residential							
Multi-Family Residential, Hotels, and Motels <sup>a</sup>							
Schools, Libraries, Museums, Hospital, Personal Care, Meeting Halls, Churches							
Auditoriums, Concert Halls, Amphitheaters							
Outdoor Sports and Recreation, Neighborhood Parks, and Playgrounds							
Office Buildings, Business, Commercial and Professional							

 **Normally Acceptable:**  
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

 **Conditionally Acceptable:**  
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

 **Unacceptable:**  
New construction or development generally should not be undertaken because mitigation is usually not feasible to comply with noise element policies.

Source: City of San Carlos, 2030 General Plan.



**NOISE**

Table 4.11-10, *Non-Transportation Noise Standards*, lists exterior and interior daytime and nighttime noise standards for various land uses, as presented in the Noise Element.

**TABLE 4.11-10 NON-TRANSPORTATION NOISE STANDARDS**

Land Use Receiving the Noise	Hourly Noise-Level Descriptor	Exterior Noise-Level Standard in Any Hour (dBA)		Interior Noise-Level Standard in Any Hour (dBA)	
		Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Residential	L <sub>50</sub>	55	45	40	30
	L <sub>max</sub>	70	60	55	45
Medical, convalescent	L <sub>50</sub>	55	45	45	35
	L <sub>max</sub>	70	60	55	45
Theater, auditorium	L <sub>50</sub>	--	--	35	35
	L <sub>max</sub>	--	--	50	50
Church, meeting hall	L <sub>50</sub>	55	--	40	40
	L <sub>max</sub>	--	--	55	55
School, library, museum	L <sub>50</sub>	55	--	40	--
	L <sub>max</sub>	--	--	55	--

**Notes:**

1. The Residential standards apply to all residentially zoned properties.
  2. Each of the noise levels specified above shall be lowered by 5 dBA for tonal noises characterized by a whine, screech, or hum, noises consisting primarily of speech or music, or recurring impulsive noises.
  3. In situations where the existing noise level exceeds the noise levels indicated in the above table, any new noise source must include mitigation that reduces the noise level of the noise source to the existing level.
  4. The exterior noise standards are measured at any point on the receiving property where there is, or could be in the future, frequent human use and quiet would be beneficial.
  5. These standards do not apply to temporary sources such as construction activities.
- Source: City of San Carlos, 2009, *San Carlos 2030 General Plan*. Revised January 2023.

## Construction Noise

Because this is a programmatic EIR, project-level conclusions of construction noise would be speculative and are therefore not presented in this analysis. Potential future impacts from construction noise are addressed qualitatively and include program-level mitigating policies.

Future development in the project area could result in two types of temporary noise impacts during construction. First, the transport of workers and movement of materials to and from the site could incrementally increase noise levels along local access roads. Second, noise would be generated from activities related to demolition, site preparation, grading, and/or physical construction. Construction is performed in distinct steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. Table 4.11-11, *Typical Construction Equipment Noise Emission Levels*, lists typical construction equipment noise levels recommended for noise-impact assessments, based on a distance of 50 feet between the equipment and noise receptor.

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**TABLE 4.11-11 TYPICAL CONSTRUCTION EQUIPMENT NOISE EMISSION LEVELS**

Construction Equipment	Typical Max Noise Level (dB(A) Lmax) <sup>a</sup>	Construction Equipment	Typical Max Noise Level (dB(A) Lmax) <sup>a</sup>
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 Insertter	85
Loader	85	Truck	88
Paver	89		

Note:

a. Measured 50 feet from the source.

Source: Federal Transit Administration, 2018, Transit Noise and Vibration Impact Assessment Manual.

As described in Section 4.11.2.1, *Construction Noise*, the City does not have established noise thresholds for construction noise, and the FTA construction noise criterion of 80 dB(A)  $L_{eq(8hr)}$  is applied in this analysis to assess construction noise impacts at sensitive receptors. As shown in Table 4.11-11, construction equipment generating high levels of noise from 81 dB(A) to 101 dB(A) exceed the applied standard. Construction of future development projects within the buildout horizon of the proposed project would most likely have multiple pieces of construction equipment operating at once, which would temporarily increase the ambient noise environment and would have the potential to affect noise-sensitive land uses in the vicinity of development sites.

Construction noise levels are highly variable and dependent upon the specific locations, site plans, and construction details of individual projects. Construction would be localized and would occur intermittently for varying periods of time. Significant noise impacts may occur from operation of heavy earth-moving equipment and truck haul operations associated with construction of individual development projects, particularly if construction techniques such as impact or vibratory pile driving are used. The time of day that construction activity is conducted would also determine the significance of such potential impacts, particularly during the more sensitive nighttime hours.

As described in Section 4.11.1.2, *Regulatory Framework*, under the subheading “San Carlos Municipal Code,” the City requires an acoustic study for any projects that may create noise levels in excess of City standards or otherwise expose noise-sensitive uses to increases of 3 dBA or more.

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In addition, the Noise (NOI) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to noise, including construction noise. The following General Plan goal and policy would serve to minimize construction noise effects:

- **Goal NOI-1:** Encourage compatible noise environments for new development and control sources of excessive noise citywide.
  - **Policy NOI-1.8:** All construction activities shall comply with the City’s noise ordinance. Development projects that require an acoustical study shall incorporate reasonable noise and vibration reduction measures and best management practices to minimize excessive noise levels during all phases of construction activity. Reduction measures and best management practices may include, but are not limited to, noise control techniques for construction tools and equipment, construction site management techniques, temporary noise barriers, noise monitoring and reporting, and/or construction traffic management.

General Plan Policy NOI-1.8 requires the implementation of construction best management practices to minimize noise to the extent feasible. Some common construction best management practices include requiring projects to:

- Use the best-available noise control techniques (e.g., improved mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) wherever feasible on equipment and trucks used for project construction.
  - Require the contractor to use impact tools (e.g., jack hammers and hoe rams) that are hydraulically or electrically powered wherever possible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.
  - Locate stationary equipment such as generators and air compressors as far as feasible from nearby noise-sensitive uses.
  - Locate stockpiling as far as feasible from nearby noise-sensitive receptors.
  - Limit construction traffic—to the extent feasible—to haul routes approved in advance of issuing building permits by the City.
  - Require the telephone numbers of the authorized representatives for the City and the contractor that are assigned to respond in the event of a noise or vibration complaint to be displayed on construction signs posted at the construction site. If the authorized contractor’s representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the City.
  - Post signs 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.
  - Require that noise-producing signals, including horns, whistles, alarms, and bells, be used for safety warning purposes only, to the extent feasible. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level,

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or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.

- Erect temporary noise barriers (at least as high as the exhaust of equipment and breaking line-of-sight between noise sources and sensitive receptors), as necessary and feasible, to maintain construction noise levels at or below the performance standard of 80 dB(A)  $L_{eq(8hr)}$  and/or when the anticipated construction duration is greater than typical (two years or greater). Barriers shall be constructed with a solid material that has a density of at least 4 pounds per square foot with no gaps from the ground to the top of the barrier.

In most cases, construction of individual development projects would temporarily increase the ambient noise environment in the vicinity of each individual project, potentially affecting existing and future nearby sensitive uses. General Plan Policy NOI-1.8 and SCMC requirements would ensure construction activities do not occur during the most sensitive time periods (e.g., evening and nighttime periods) and require future discretionary projects to assess and minimize construction noise levels consistent with City goals, policies, and code standards as applicable. With compliance with SCMC requirements and General Plan Policy NOI-1.8, in addition to best management practices, temporary program-level construction noise impacts associated with implementation of the proposed 2045 General Plan Reset are considered *less than significant*.

**Significance without Mitigation:** Less than significant.

### Traffic Noise

Future development within the buildout horizon of the proposed project would cause increases in vehicle traffic along local roadways. Vehicle traffic noise levels were estimated using the FHWA Highway Traffic Noise Prediction Model. Vehicle traffic volumes for existing and 2045 conditions were obtained from Kittelson and Associates (see Appendix C, *Noise Data*). Vehicle trips for the proposed project include all trip purposes, such as home-based trips, work commute trips, recreational trips, and school-related trips. The FHWA model predicts noise levels through a series of adjustments to a reference sound level. These adjustments account for distances from the roadway, vehicle traffic volumes, vehicle speeds, car/truck mix, number of lanes, and road width.

Table 4.11-12, *Project-Related Increase in Cumulative Traffic Noise, dBA CNEL*, shows the existing and future predicted noise levels at 50 feet from the nearest travel centerline, as well as the predicted traffic noise increases with implementation of the project. Appendix C, *Noise Data*, of this Draft EIR contains the traffic noise modeling inputs and outputs.

As shown in Table 4.11-12, there are no roadway segments that would experience a traffic noise increase of 1.5 dBA CNEL or greater with buildout of the proposed project. The highest traffic noise increase is predicted to be 1 dBA CNEL along El Camino Real. Therefore, traffic noise impacts due to implementation of the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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**TABLE 4.11-12 PROJECT-RELATED INCREASE IN CUMULATIVE TRAFFIC NOISE, dBA CNEL**

Roadway	Segment		dBA CNEL at 50 Feet			2045 Noise Increase, CNEL	Significant Increase
	From	To	Existing	2045 No Project	2045 Plus Project		
El Camino Real	the North	Holly St	69	69	70	1	No
El Camino Real	Holly St	San Carlos Ave	70	69	70	1	No
El Camino Real	San Carlos Ave	Brittan Ave	70	70	71	1	No
El Camino Real	Brittan Ave	Howard Ave	69	69	70	1	No
El Camino Real	Howard Ave	the South	70	69	70	1	No
Old Country Road	the North	Holly St	66	68	68	<1	No
Old Country Road	Holly St	Brittan Ave	63	65	65	<1	No
Old Country Road	Brittan Ave	Howard Ave	67	69	69	<1	No
Old Country Road	Howard Ave	the South	65	67	67	<1	No
Industrial Road	the North	Holly St	67	69	70	<1	No
Industrial Road	Holly St	Brittan Ave	67	70	70	<1	No
Industrial Road	Brittan Ave	the South	67	69	69	<1	No
Club Drive	San Carlos Ave	the South	62	63	64	<1	No
Alameda de Las Pulgas	San Carlos Ave	Brittan Ave	64	65	65	<1	No
Alameda de Las Pulgas	Brittan Ave	the South	64	65	65	<1	No
Holly Street	the West	El Camino Real	64	65	66	<1	No
Holly Street	El Camino Real	Old Country Rd	61	62	62	<1	No
Holly Street	Old Country Rd	Industrial Rd	66	67	67	<1	No
San Carlos Avenue	Club Dr	Alameda de Las Pulgas	59	61	61	<1	No
San Carlos Avenue	Alameda de Las Pulgas	El Camino Real	64	64	64	<1	No
Brittan Avenue	the West	Alameda de Las Pulgas	63	64	64	<1	No
Brittan Avenue	Alameda de Las Pulgas	El Camino Real	62	64	64	<1	No
Brittan Avenue	Old Country Rd	Industrial Rd	63	64	65	<1	No
Howard Avenue	the West	El Camino Real	63	63	63	<1	No
Howard Avenue	Old Country Rd	the East	62	63	63	<1	No

Source: Federal Highway Administration Highway Traffic Noise Prediction Model based on traffic volumes provided by Kittelson and Associates in 2024. Calculations included in Appendix C, *Noise Data*, of this Draft EIR.

## Rail Noise

As discussed in Section 4.11.1.3, *Existing Conditions*, the City of San Carlos has one rail line that runs north-south through the eastern half of the city along El Camino Real. In addition to the scheduled stops, Caltrain makes a number of passbys through the city throughout the day. Day-night average noise levels are estimated to range from 67 to 69 dBA  $L_{dn}$  at a distance of 100 feet from the tracks. Due to the grade

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separation of the line, train warning whistles are not sounded frequently in San Carlos but can generate maximum noise levels of approximately 105 dBA at 100 feet.

The Noise (NOI) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to noise, including rail noise. The following General Plan goal and policies would integrate noise considerations into land use planning decisions and require design strategies for minimize noise effects:

- **Goal NOI-1:** Encourage compatible noise environments for new development and control sources of excessive noise citywide.
  - **Policy NOI-1.1** Use the Noise and Land Compatibility Standards shown in Figure 9-1, the noise level performance standards in Table 9-1 and the projected future noise contours for the General Plan shown in Figure 9-3 and detailed in Table 9-2, as a guide for future planning and development decisions.
  - **Policy NOI-1.2** Minimize noise impacts on noise sensitive land uses. Noise-sensitive land uses include residential uses, retirement homes, hotel/motels, schools, libraries, community centers, places of public assembly, daycare facilities, churches and hospitals.
  - **Policy NOI-1.3** Limit noise impacts on noise-sensitive uses to noise level standards as indicated in Table 9-1.
  - **Policy NOI-1.4** Require a detailed acoustic report in all cases where noise-sensitive land uses are proposed in areas exposed to exterior noise levels of 60 CNEL Ldn or greater. If recommended in the report, mitigation measures shall be required as conditions of project approval.
  - **Policy NOI-1.5** New development of noise-sensitive land uses proposed in noise-impacted areas shall incorporate effective mitigation measures into the project design to reduce exterior and interior noise levels to the following acceptable levels:
    - a. For new single-family residential development, maintain a standard of 60 Ldn (day/night average noise level) for exterior noise in private use areas.
    - b. For new multi-family residential development maintain a standard of 65 Ldn in community outdoor recreation areas. Noise standards are not applied to private decks and balconies and shall be considered on a case-by-case basis.
    - c. Interior noise levels shall not exceed 45 Ldn in all new residential units (single- and multi-family). Development sites exposed to noise levels exceeding 60 Ldn shall be analyzed following protocols in Appendix Chapter 12, Section 1208, A, Sound Transmission Control, 2001 Building Code Chapter 12, Appendix Section 1207.11.2 of the 2007 California Building Code (or the latest revision).
    - d. Where new residential units (single and multi-family) would be exposed to intermittent noise levels generated during train operations, maximum railroad noise levels in side homes shall not exceed 50 dBA in bedrooms or 55 dBA in other occupied spaces. These single event limits are only applicable where there are normally four or more train operations per day.

- **Policy NOI-1.6** Where noise mitigation measures are required to achieve the noise level standards, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered after practical design-related noise mitigation measures have been integrated into the project.
- **Policy NOI-1.9** Minimize potential transportation related noise through the use of setbacks, street circulation design, coordination of routing and other traffic control measures and the construction of noise barriers and consider use of “quiet” pavement surfaces when resurfacing roadways.

Noise levels along the railroad under the proposed project would remain the same as existing conditions; any changes to the frequency of trains or to train equipment would be initiated and implemented by the respective rail authority, rather than the City of San Carlos, and are not part of the proposed project. However, implementation of the proposed project could locate sensitive receptors and future structures near the existing rail line with development intensity to accommodate new population and employment growth. All future development projects subject to discretionary review under the proposed project would be evaluated for noise/land use compatibility, including railway noise/land use compatibility. Caltrain noise sources are addressed with General Plan Policies NOI-1.1 through NOI-1.6, and NOI-1.9, land use compatibility standards, shown in Table 4.11-10, *Non-Transportation Noise Standards*, and requirements and limitations of SCMC 18.21.050-B, shown in Table 4.11-7, *Noise Exposure—Land Requirements and Limitations*.

No aspect of the proposed project would increase railway noise levels along the existing railroad. Compliance with SCMC requirements and General Plan goals and policies would ensure rail noise impacts associated with implementation of the proposed 2045 General Plan Reset are considered *less than significant*.

**Significance without Mitigation:** Less than significant.

## Stationary Source Noise

Stationary sources of noises may occur on all types of land uses. Residential uses generate noise from landscaping, maintenance activities, and air conditioning systems. Commercial uses generate noise from HVAC systems, loading docks, and other sources. Industrial uses may generate noise from HVAC systems, loading docks, and possibly machinery. Noise generated by residential or commercial uses is generally short and intermittent. Industrial uses may generate noise on a more continual basis. Nightclubs, outdoor dining areas, gas stations, car washes, fire stations, drive-throughs, swimming pool pumps, school playgrounds, and public parks are other common noise sources. Stationary noise sources are controlled by General Plan non-transportation noise standards, shown in Table 4.11-10, *Non-Transportation Noise Standards*, and SCMC Section 9.30 and Section 18.21.050.

With adherence to SCMC requirements and General Plan goals, policies, and actions, stationary noise impacts associated with future development and activities under the proposed project are considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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NOISE-2	The proposed project would not generate excessive groundborne vibration or groundborne noise levels.
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## Construction Vibration

Construction of future projects in the project area would generate varying degrees of ground vibration that may cause human reactions (annoyance) and effects on buildings (damage), depending on the construction procedures and equipment. The use of construction equipment generates vibration that spreads through the ground and diminishes with distance from the source. The effect on sensitive buildings in the vicinity of a construction site varies depending on soil type, ground strata, and the type of construction equipment used. 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 a construction site. However, vibration is almost never annoying to people who are outdoors, so it is usually evaluated in terms of indoor receivers. Table 4.11-14, *Reference Vibration Levels for Construction Equipment*, lists typical vibration levels for construction equipment in PPV and VdB.

**TABLE 4.11-14 REFERENCE VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT**

Equipment	Approximate Vibration Level at 25 feet, PPV in/sec <sup>a</sup>	Approximate Vibration Level at 25 feet, VdB re 1 micro-in/sec <sup>b</sup>
Pile Driver, Impact (Upper Range)	1.518	112
Pile Driver, Impact (Typical)	0.644	104
Pile Driver, Sonic (Upper Range)	0.734	105
Pile Driver, Sonic (Typical)	0.170	93
Vibratory Roller	0.210	94
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Note:

a. Peak Particle Velocity (PPV) = The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.

b. Vibration Decibel (VdB) = A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is one microinch per second (1x10<sup>-6</sup> in/sec).

Source: Federal Transit Administration, 2018, *Transit Noise and Vibration Impact Assessment*.

As described in Section 4.11.2.3, *Vibration*, because the City does not have established thresholds for vibration, Caltrans' vibration thresholds shown in Table 4.11-3, *Construction Vibration Damage Criteria*, are applied to the assessment building damage and FTA thresholds shown in Table 4.11-4, *FTA Groundborne Vibration Impact Criteria*, are applied to the assessment of human annoyance. As shown in Table 4.13-14, vibration generated by construction equipment has the potential to be substantial, since it has the potential to exceed the Caltrans criteria for architectural damage (i.e., 0.12 in/sec PPV for buildings extremely susceptible to vibration damage, 0.2 in/sec PPV for nonengineered timber and masonry buildings, and 0.3 in/sec PPV for engineered concrete and masonry). Typical construction



activities may be barely to distinctly perceptible when occurring within approximately 150 feet of sensitive land uses with regards to annoyance. Most construction equipment does not operate in the same location for prolonged periods of time. Therefore, even if construction equipment were to operate near a building where receptors may feel vibration, it would only be for a temporary amount of time and would be limited to daytime hours.

Vibration sources are controlled by SCMC Section 9.30.070, limiting construction to daytime hours, and Section 18.21.060, temporary construction vibration exemption. In most cases of individual developments associated with implementation of the proposed project, construction that requires the use of vibration-causing construction equipment, such as pile driving, caisson drilling, vibratory roller, or a large bulldozer, would temporarily increase the ambient vibration environment in the vicinity of the individual project, potentially affecting existing and future nearby sensitive receptors. The use of alternate methods/equipment for construction throughout the entire active construction period would help to ensure that construction vibration is minimized to the extent feasible. Some common alternate methods/equipment used for construction include, but are not limited to:

- For pile driving, the use of caisson drilling (drill piles), vibratory pile drivers, oscillating or rotating pile installation methods, pile pressing, “silent” piling, and jetting or partial jetting of piles into place using a water injection at the tip of the pile.
- For paving, use of a static roller in lieu of a vibratory roller.
- For grading and earthwork activities, off-road equipment limited to 100 horsepower or less.

Compliance with SCMC requirements construction in addition to best management practices, temporary program-level construction vibration impacts associated with implementation of the proposed project are considered *less than significant*.

**Significance without Mitigation:** Less than significant.

## Caltrain Vibration

The proposed project could facilitate the construction of new buildings adjacent to the existing Caltrain railroad tracks. With regards to vibration impacts on new development near railroads, human disturbance is the primary concern. Trains are considered to be a source of perceptible ground-borne vibration within approximately 50 to 100 feet of the tracks. It is extremely rare for vibration levels from trains passing to result in structural damage to buildings. Ground vibration levels along the railroad corridors are proportional to the speed and weight of the trains as well as the condition of the tracks and train engine and car wheels.

The Noise (NOI) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to noise, including rail noise. The following General Plan goal and policies would integrate noise considerations into land use planning decisions and require design strategies to minimize noise effects associated with trains:

## NOISE

- **Goal NOI-1:** Encourage compatible noise environments for new development and control sources of excessive noise citywide.
  - **Policy NOI-1.7** The City shall seek to reduce impacts from ground-borne vibration associated with rail operations by requiring that vibration-sensitive buildings (e.g. residences) are sited at least 100 feet from the centerline of the railroad tracks whenever feasible. The development of vibration-sensitive buildings within 100 feet from the centerline of the rail-road tracks would require a study demonstrating that ground borne vibration issues associated with rail operations have been adequately addressed (i.e. through building siting, foundation design and construction techniques).
  - **Policy NOI-1.14** The Federal Transit Administration vibration impact criteria and assessment methods shall be used to evaluate the compatibility of train vibration with proposed land uses adjoining the UPRR (Caltrain) corridor. Site specific vibration studies shall be completed for vibration- sensitive uses proposed within 100 feet of active railroad tracks.

Ground vibration from trains passing through San Carlos could exceed the annoyance guidelines set forth by the FTA, shown in Table 4.11-4, if new buildings are constructed within 100 feet of the railroad tracks. Policies NOI-1.7 and NOI-1.14 of the Noise Element calls for a study applying FTA vibration criteria to ensure that ground borne vibration issues associated with rail operations are adequately addressed for new development within 100 feet from the centerline of the railroad tracks.

Compliance with General Plan Policies NOI-1.7 and NOI-1.14 would ensure that Caltrain vibration impacts associated with implementation of the proposed 2045 General Plan Reset are considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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NOISE-3	The proposed project would not expose people residing or working in the project area to excessive noise levels 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.
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As discussed in Section 4.11.1.3, *Existing Conditions*, the San Carlos Airport is a reliever airport that accommodates almost 400 based aircraft and a variety of aviation related businesses including flight. The flight pattern is generally north and east of US Highway 101. Noise from aircraft is audible, but not in excess of 65 dBA CNEL, General Plan San Carlos Airport Noise Contour Map Figure 9-2, the 55 dBA CNEL/L<sub>dn</sub> noise contour does not extend west of Industrial Road. Land uses near the San Carlos Airport are predominantly commercial and industrial uses that are compatible with the aircraft noise of up to 65 dBA CNEL/L<sub>dn</sub> and 70 dBA CNEL/L<sub>dn</sub>, respectively.

The Noise (NOI) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to noise, including rail noise.

## NOISE

The following General Plan goal and policies would integrate noise considerations into land use planning decisions and require design strategies to minimize noise effects associated with the San Carlos Airport:

- **Goal NOI-1:** Encourage compatible noise environments for new development and control sources of excessive noise citywide.
  - **Policy NOI-1.11** Ensure that proposed noise sensitive land uses include appropriate mitigation to reduce noise impacts from aircraft operations at San Carlos Airport. Work with the San Carlos Airport Pilots Association and San Mateo County to continue to refine and implement the Airport's noise abatement procedures.
  - **Policy NOI-1.12** Ensure consistency with the noise compatibility policies and criteria contained in the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport.
  - **Policy NOI-1.13** Require a noise analysis for new residential uses located within the 55 CNEL impact area of the San Carlos Airport. If recommended in the report, mitigation measures shall be required as conditions of project approval.

Aircraft noise sources are controlled by General Plan Policies NOI-1.11 through NOI-1.13, SCMC Sections 18.21.050-F and 18.21.150-C, and compliance with land use compatibility standards of the San Carlos Airport Land Use Plan would require a noise analysis if residential uses located within 55 dBA CNEL/L<sub>dn</sub> airport noise contour and ensure appropriate mitigation measures are included at proposed noise sensitive uses.

Compliance with General Plan Policies NOI-1.11 and NOI-1.13, SCMC Sections 18.21.050-F and 18.21.150-C, and compliance with land use compatibility standards of the San Carlos Airport Land Use Plan, would ensure aircraft noise impacts associated with implementation of the proposed 2045 General Plan Reset are considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>NOISE-4</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative noise impacts in the area.</b>
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Implementation of the proposed 2045 General Plan Reset would result in construction noise and vibration with development of individual projects to be constructed over time. Typically, if there are no planned or approved projects within 500 feet of a proposed project, there would be no cumulative construction noise impact. Construction noise is greatly reduced at distance 500 feet or further in an urban and buildout environment. If construction of individual projects were to overlap with cumulative projects in the vicinity, construction noise could result in a significant cumulative construction noise impact. Each individual project would be subject to City regulations and policies regarding construction noise and vibration, as discussed under impact discussions NOISE-1 and NOISE-2. These policies, measures, and best management practices require the appropriate evaluation of construction noise and vibration impacts at sensitive receptor locations and to implement feasible construction noise and vibration control measures when development occurs near noise-sensitive

## NOISE

receptors to ensure residents would not be exposed to excessive construction noise and vibration levels. Therefore, cumulative construction noise and vibration impacts would be *less than significant*.

While traffic volumes would likely increase regardless of the implementation of the proposed project, the proposed project would introduce new development that would contribute to cumulative traffic volumes. A significant cumulative traffic noise increase would be identified if project traffic were calculated to contribute an increase of greater than the significance thresholds (1.5 dBA for ambient noise environments of 65 dBA CNEL and higher; 3 dBA for ambient noise environments of 60 to less than 65 CNEL; and 5 dBA for ambient noise environments of less than 60 dBA CNEL). As shown in Table 4.11-12, *Project-Related Increase in Cumulative Traffic Noise, dBA CNEL*, project contribution to the cumulative increase of traffic noise would not exceed 1 dBA CNEL. Future cumulative transportation noise levels would not exceed the established noise standards, resulting in a significant cumulative impact. Therefore, cumulative traffic noise impacts would be *less than significant*.

Individual development projects would contribute to potential permanent increases in stationary noise levels evaluated under Impact NOISE-1. Individual development projects would be required to show compliance with City's noise standards and General Plan noise policies for potential operational noise impacts during the development review process through evaluation and design considerations. New noise sensitive development would be limited in noise-impacted areas unless the development includes measures to reduce noise and vibration levels to acceptable levels. New noise producing developments would be required to show compliance with the SCMC noise standards to protect residents from excessive stationary noise sources. Therefore, cumulative operational noise impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## PARKS AND RECREATION

### 4.12 PARKS AND RECREATION

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to parks and recreation, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.12.1 ENVIRONMENTAL SETTING

##### 4.12.1.1 REGULATORY FRAMEWORK

###### State Regulations

The 1975 Quimby Act (California Government Code Section 66477) authorizes cities and counties to adopt ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for operation and maintenance of park facilities. A 1982 amendment (Assembly Bill [AB] 1600) requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or parkland and the type of development project upon which the fee is imposed. Cities with a high ratio of park space to inhabitants can set a standard of up to 5 acres per 1,000 persons for new development. Cities with a lower ratio can only require the provision of up to 3 acres of park space per 1,000 persons.<sup>1</sup> The calculation of a city's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of City-owned parkland.

###### Regional Regulations

In 1969, the McAteer-Petris Act designated the Bay Conservation and Development Commission (BCDC) as the agency responsible for the protection of the San Francisco Bay and its natural resources. BCDC fulfills this mission through the implementation of the *San Francisco Bay Plan* (Bay Plan), an enforceable plan that guides the future protection and use of San Francisco Bay and its shoreline.<sup>2</sup> The Bay Plan includes a range of policies on public access, water quality, project design, and dredging and fill. The Bay Plan also designates shoreline areas that should be reserved for water-related sports, industry, and public recreation; airports; and wildlife areas. Note that the City of San Carlos is within BCDC's jurisdiction. Impacts related to aesthetics, biological resources, and water quality, are discussed in Chapter 4.1, *Aesthetics*, Chapter 4.3, *Biological Resources*, and Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR.

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<sup>1</sup> California Legislative Information, 2015, Assembly Bill No. 1191, Chapter 276, [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=201520160AB1191](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB1191), accessed July 29, 2022.

<sup>2</sup> San Francisco Bay Conservation and Development Commission, May 5, 2020, *San Francisco Bay Plan*, <https://bcdcc.ca.gov/pdf/bayplan/bayplan.pdf>, accessed August 9, 2022.

## PARKS AND RECREATION

### Local Regulations

#### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.12.3, *Impact Discussion*.

#### *San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) includes various directives pertaining to parks and recreation. The SCMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to parks and recreation impacts are included in Title 3, *Revenue and Finance* and Title 17, *Subdivisions*.

- Chapter 3.34, *Park Facility Development Fee*, as known as the Park Facility Development Fee Law of the City of San Carlos, applies to new residential development buildings in San Carlos. The Park Facility Development fee for Fiscal Year 2024-25 is \$2,709 per bedroom.
- Section 17.32.030, *Park and recreation land dedications or in-lieu fees*, states that where a park or recreational facility has been designated in the General Plan, and the park or facility is to be located in whole or in part within a proposed subdivision to serve the immediate and future needs of the residents of the subdivision, the subdivider shall be required to dedicate land for park and recreational facilities sufficient in size to serve the residents of the subdivision area. Additionally, if there are no park or recreation facilities designation but the subdivision is within a one-half-mile radius of a neighborhood park or recreational facility the subdivider shall be required to pay a cash payment in lieu of the land equal to the value of the land.

#### *Parks, Open Space, Buildings and other Recreational Facilities Master Plan 2009-2029*

Local regulations for parks and recreational facilities are contained within the Master Plan for Parks, Open Space, Buildings and other Recreational Facilities (Parks Master Plan), which was adopted in August 2008. The purpose of the Parks Master Plan is to provide the City with a long-term vision for its park system. The Parks Master Plan addresses the City's park service standards, including park acres per capita, walking distance to park facilities, ideas for new parks, and improvements to existing parks. The Parks Master Plan assumes a population of 34,264 in 2030, which is approximately 3,435 more people than the existing conditions of San Carlos in 2024. Using this rate of population growth, in addition to other factors, the Parks Master Plan identifies the following needs within the next 10 to 15 years:

- Expand hiking trails system
- New community swimming pool/aquatic center
- New performing Arts Center
- Additional athletic fields
- New community center/community gathering space
- Indoor gymnasium space for all ages
- New dog park
- New outdoor skate park

## PARKS AND RECREATION

- Playground upgrades
- Improvements and upgrades to existing parks

The implementation strategy prioritizes and schedules park system improvements, and discusses funding for capital improvements, ongoing operation costs and maintenance. The following service standards are discussed in the Parks Master Plan:

- Parks Provision Standard: Provide 2.5 acres of developed/active parks for every 1,000 residents in San Carlos.
- Trails Provision Standard: Provide 1-mile of hiking trail per 1,000 residents.
- Walkability Policy: Locate a park or recreational facility within ¼- to ½-mile of every resident.

In 2024, the City of San Carlos began the process to update the Parks Master Plan.

### *Trails Connections Plan*

The San Carlos Trails Committee completed a Trails Connections Plan that was adopted by City Council in February 2007. The Trail Connections Plan identified and prioritized 14 possible connections to our local trail system as well as neighboring regional open space parks and trails, including Pulgas Ridge, and trails within the City of Belmont and the County of San Mateo.

### *San Carlos Hillside Trails Plan*

Adopted in 2012, the San Carlos Hillside Trails Plan identifies 1.62 miles of new trails within Big Canyon Park, Eaton Park, and Devonshire Canyon. The Hillside Trails Plan also provides design guidelines and construction protocols, in addition to a parking program for the identified trails.

## 4.12.1.2 EXISTING CONDITIONS

A variety of different park lands and facilities are needed to serve the diverse needs of the community. The City's parks include mostly developed, or active, parkland and some undeveloped sites.

## Parks and Open Space

San Carlos residents have access to a variety of open space and park areas in and around the city. According to the Parks Master Plan, San Carlos contains 62.5 acres of traditional developed parkland.<sup>3</sup> These parks and open space areas provide passive recreation facilities, including trails, views, natural vegetation and wildlife and environmental education facilities. The City's Parks and Recreation Department manages 16 parks, including 3 community parks, 4 neighborhood parks, 5 mini parks, 2 open space parks, and 2 dog parks. Additionally, Eaton Park and Big Canyon Park offer 73 acres of natural open space in the City of San Carlos.

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<sup>3</sup> City of San Carlos, Parks, Open Space, Buildings, and other Recreational Facilities Master Plan 2009 – 2029, [https://cms3.revize.com/revize/sancarlos/Departments/Parks%20and%20Recreation/CIP/San%20Carlos%20Park%20Master%20Plan%20Final%2009-08\[1\].pdf](https://cms3.revize.com/revize/sancarlos/Departments/Parks%20and%20Recreation/CIP/San%20Carlos%20Park%20Master%20Plan%20Final%2009-08[1].pdf), accessed on October 16, 2024.

## PARKS AND RECREATION

Other open space areas around the city are owned and operated by the Midpeninsula Regional Open Space District (MROSD), San Mateo County, and the State Department of Fish and Game. MROSD manages 26 open space preserves totaling over 57,000 acres. The three closest MROSD preserves are Pulgas Ridge, Purisima Creek Redwoods, and Teague Hill, with Pulgas Ridge Open Space Preserve located within San Carlos' sphere of influence. San Mateo County manages five regional parks. The largest is the 467-acre Edgewood Preserve, located approximately 3 miles south of San Carlos. The State Department of Fish and Wildlife runs Bair Island, a 1,985-acre Ecological Preserve within the Don Edwards National Wildlife Refuge. The Don Edwards National Wildlife Refuge is provided by the United States Fish and Wildlife Service and is located adjacent to San Carlos in the wetlands of San Francisco Bay.

Recent park improvement projects include pickleball courts at Crestview Park, installation of new sports field lighting at Flanagan Field & Stadium Field, Chilton Park improvements, and an LED sports field lighting design at Burton & Highlands Parks.<sup>4</sup> Design for new improvements are underway as part of the North Crestview Park Master Plan Project.<sup>5</sup>

As described in Chapter 3, *Project Description*, of this Draft EIR, the existing population of San Carlos is 28,890 people. San Carlos contains 62.5 acres of traditional developed parkland, which equates to 2.2 acres of parks per 1,000 residents.<sup>6</sup> This is below the standard established in the City's Parks Master Plan of 2.5 acres of traditional parkland for every 1,000 residents. Taking into account the city's existing open space, San Carlos contains 135 acres of both traditional developed parkland and open space which equates to 4.7 acres per 1,000 residents.<sup>7</sup>

The City of San Carlos is currently undergoing an update to the Parks Master Plan, which was last developed in 2009. This project also includes an update to the Parks and Recreation Element of the General Plan. The San Carlos Parks Master Plan will guide the City in enhancing the current park system to accommodate the needs of the existing and growing community and visitors for the next 20 years.<sup>8</sup>

### Recreational Programs

A variety of programs for youth and adults are organized through the Parks and Recreation Department. The Department also runs the San Carlos Youth Center at 1001 Chestnut Street, at the edge of Burton Park, which is open to pre-teens and young teens on weekdays from 9:00 a.m. to 7:00 p.m. and on Saturdays from noon to 5:00 p.m. and the Adult Community Center at 601 Chestnut Street.

### 4.12.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant parks and recreation impact if it would:

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<sup>4</sup> City of San Carlos Parks and Recreation, communication with PlaceWorks in October 2024.

<sup>5</sup> City of San Carlos Parks and Recreation, communication with PlaceWorks in October 2024.

<sup>6</sup>  $28,890 \text{ people} / 1,000 = 28.89$ ;  $62.5 \text{ acres} / 28.89 = 2.2 \text{ acres per } 1,000 \text{ people}$

<sup>7</sup>  $28,890 \text{ people} / 1,000 = 28.89$ ;  $135 \text{ acres} / 28.89 = 4.7 \text{ acres per } 1,000 \text{ people}$

<sup>8</sup> City of San Carlos, Parks and Recreation Capital Improvement Projects,

[https://www.cityofsancarlos.org/city\\_hall/departments\\_and\\_divisions/parks\\_and\\_recreation/parks\\_and\\_facilities/parks\\_and\\_recreation\\_capital\\_improvement\\_projects.php](https://www.cityofsancarlos.org/city_hall/departments_and_divisions/parks_and_recreation/parks_and_facilities/parks_and_recreation_capital_improvement_projects.php), accessed on December 4, 2024.



## PARKS AND RECREATION

- REC-1 Result in substantial adverse physical impacts associated with the provision of new or physically altered parks or recreation facilities, need for new or physically altered parks or recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks or recreation facilities.
- REC-2 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.
- REC-3 Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
- REC-4 In combination with past, present, and reasonably foreseeable projects, result in cumulative recreation impacts in the area.

### 4.12.3 IMPACT DISCUSSION

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REC-1	The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered parks or recreation facilities, need for new or physically altered parks or recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks or recreation facilities.
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As discussed in Section 4.12.1.2, *Existing Conditions*, the EIR Study Area currently provides 2.2 acres of parks per 1,000 residents. Buildout projections for the proposed project include an increase in residential development, which would increase the demand for parks and recreational facilities. If no further parkland is added by 2045, and the existing 62.5 acres of parkland serve the projected total 2045 population of 46,450 people, then the ratio of parkland per 1,000 population would decrease to 1.34 acres of parks per 1,000 residents. However, this is a very conservative assumption (i.e., it represents a “worst case” scenario), as it is expected that parks will be acquired, expanded, and/or made publicly accessible as part of private development over the horizon of the proposed project.

SCMC Section 17.32.030 would continue to require residential subdivisions to either provide parkland or pay in-lieu fees to the City to dedicate parkland elsewhere. Additionally, SCMC Chapter 3.34 requires new residential projects to pay park facility development fees. This would result in an incremental addition of parkland if a residential subdivision or residential development is proposed in the city.

Additionally, the Land Use (LU) Element and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to parks and recreation, including available parkland and the quality of facilities. The following General Plan goals, policies, and actions would serve to reduce impacts to performance objectives for parks and recreation facilities:

- **Goal LU-2:** Preserve and strengthen Downtown as the civic, cultural and social heart of the city.

## PARKS AND RECREATION

- **Policy LU-2.15:** Provide for and encourage the development of parks and public gathering places in and near Downtown.
- **Goal LU-7:** Promote the community character of San Carlos, including the unique village character of Downtown.
  - **Action LU-7.3:** Revise the Zoning Ordinance to establish a zoning district for existing parks and open space lands and amend the zoning map accordingly.
- **Goal LU-9:** Protect and enhance all residential neighborhoods.
  - **Policy LU-9.6:** Encourage the location of support facilities such as schools, parks and churches within or near residential neighborhoods.
  - **Policy LU-9.16:** Require a contribution of parkland and/or fees in-lieu of land dedication as a condition of approval of all new residential subdivisions.
  - **Policy LU-9.18:** Continue the City's program of joint use of school recreation facilities as a means of providing adequate recreation space for San Carlos citizens.
- **Goal PR-1:** Increase the amount of City-owned park and open space land.
  - **Policy PR-1.1:** Actively pursue land acquisitions to provide additional recreational opportunities, especially in underserved areas, which will help the City achieve the goal of increased park land.
  - **Policy PR-1.2:** Maintain a balance of athletic fields, active parks and passive open space that supports a variety of recreational uses.
  - **Action PR-1.1:** Explore opportunity sites for the development of new parks facilities, focusing on providing recreation opportunities to underserved areas based on the City's Master Plan for Parks, Open Space, Buildings and other Recreational Facilities.
  - **Action PR-1.2:** Work to fund land acquisition for parks and open space including all available mechanisms both public and private.
  - **Action PR-1.3:** Continue to monitor possibilities for acquisition of land to expand the Adult Community Center and/or City Hall Park.
  - **Action PR-1.4:** Strive to provide a minimum of 2.5 acres of traditional parkland for every 1,000 residents.
  - **Action PR-1.5:** Strive to provide a park facility within ½-mile of every resident.
  - **Action PR-1.6:** Provide the opportunity for the Parks and Recreation Department during the development review process to assess on-site open space and recreational amenities.
  - **Action PR-1.7:** Investigate acquisition of open space lands or easements to expand trail network, especially in areas adjacent to existing open space.
  - **Action PR-1.9:** Update the City's park development impact fee to address residential renovations, remodels and additions that potentially increase the number of residents living in a dwelling unit.

## PARKS AND RECREATION

- **Action PR-1.10:** Identify parcels that may be suitable for acquisition; for example, parcels in underserved areas of the city and parcels adjacent to parks and public facilities.
- **Action PR-1.11:** Consider adoption of an ordinance requiring the maximum allowable park land dedication fee.
- **Action PR-1.12:** All City-owned Park Facilities and Open Space Park Facilities, as defined by the Municipal Code, should be rezoned to allow such uses. The City Council may change the zoning to allow other uses if it finds that it is a change in use that will meet the goals of the Parks and Recreation Element of the General Plan.
- **Goal PR-2:** Provide cultural, historical, environmental education and recreational facilities that support a diversity of needs and interests.
  - **Policy PR-2.1:** Consider the recreational needs and interests of all segments of the San Carlos community when evaluating decisions relating to parks facilities.
  - **Policy PR-2.2:** Consider establishing a new facility for the visual and performing arts.
  - **Policy PR-2.3:** Continue to support implementation of trail connections as identified in the City's Potential Trail Connections Plan.
  - **Policy PR-2.4:** Continue to maintain City-owned open space trails and connections to regional trails.
  - **Policy PR-2.6:** Complete the Bay Trail alignment in San Carlos.
  - **Policy PR-2.10:** Improve the availability and quality of athletic fields in San Carlos
  - **Action PR-2.1:** Study the feasibility of acquiring additional parkland to construct a new community center and outdoor aquatics facility.
  - **Action PR-2.4:** Continue and enhance alternative funding strategies for providing additional facilities, including naming rights and sponsorships, grants and endowments.
  - **Action PR-2.6:** Prepare an Open Space Management and Trails Master Plan to further identify trail connectivity and future trail development for public benefit.
  - **Action PR-2.7:** Maintain a current map of trails that is available to the public and update as necessary to define trails as multi-use or single-use.
  - **Action PR-2.8:** Extend and improve trails in Big Canyon, Eaton Park and Arguello Park.
  - **Action PR-2.9:** Consider providing space, whether in new or existing parks, for off-leash dog areas, a skate park, bocce courts, Frisbee golf, BMX bicycling and other alternative sports.
- **Goal PR-3:** Provide recreational programs to meet the needs of all residents.
  - **Policy PR-3.1:** Ensure that recreational programs are available for all ages and abilities.
  - **Policy PR-3.2:** Support recreational programs that encourage the interaction of different segments of the San Carlos population.
  - **Policy PR-3.3:** Expand the availability of aquatics facilities and programming.

## PARKS AND RECREATION

- **Policy PR-3.4:** Promote visual and performing arts programs.
- **Policy PR-3.5:** Ensure that parks facilities and usage will only be expanded with a commensurate expansion in maintenance resources, including future staff and equipment.
- **Policy PR-3.6:** Partner with adjacent agencies including San Mateo County, Belmont Parks and Recreation, San Francisco Public Utilities Commission and the Midpeninsula Regional Open Space District to provide expanded parks and open space amenities for San Carlos residents.
- **Policy PR-3.7:** Protect the Youth Center as a valuable venue giving priority to youth activities and programs as subject to the terms in the Youth Center Use Policy adopted by City Council.
- **Action PR-3.1:** Seek to establish a joint use agreement with the Sequoia Union High School District to increase access to pools, gymnasiums, theaters, athletic fields and other facilities.
- **Action PR-3.2:** Seek to improve existing fields through the City/San Carlos Elementary School District joint use agreement.

As indicated above, new residents from future development within the buildout horizon of the proposed project would increase the demand for park facilities, and park standards could require the construction of new or expanded neighborhood or community parks in order to meet the City's parkland standard of 2.5 acres per 1,000 residents. As required by the SCMC, new residential development would be required to pay park impact fees at the time of future project approval to generate revenue to fund the park facilities needed to serve new development. Furthermore, as shown in the General Plan goals, policies, and actions listed above, the City would update existing parks and acquire new parks in San Carlos over the 2045 horizon of the proposed project. Implementation of and adherence to the General Plan goals, policies, and actions listed above, and ongoing collection of impact fees, would help to meet acceptable service levels.

As described above, the city is currently not meeting its established service level standard of 2.5 acres of parkland per 1,000 residents, and with the projected population increase the City of San Carlos would need to continue to expand neighborhood or community parks. Potential impacts would occur if the physical expansion or construction of a park would cause significant environmental impacts. The proposed project is a policy-level document and does not propose specific development projects. The estimated timing or location of such facilities or the exact nature of these facilities are not known at this time, so project-specific environmental impacts that could occur from their construction and operation cannot be determined at this time. Depending on the type, size, and location of new parks, the construction of new parks would be subject to environmental review and the mitigating policies and mitigation measures described in this EIR to ensure the impacts from the construction would be less than significant. The construction of project-specific parks would require permitting and review in accordance with City standards, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. Therefore, the impact is considered *less than significant*.

**Significance without Mitigation:** Less than significant.

## PARKS AND RECREATION

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<b>REC-2</b>	<b>The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.</b>
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Future development in San Carlos would result in increased population, which would increase demands for parks and recreational facilities in the EIR Study Area and regional parks in the larger San Mateo County area. The increased number of residents and workers anticipated by 2045 could increase park use and cause physical deterioration of park facilities.

Population increases in San Carlos would occur incrementally over time. As described in Section 4.12.1.1, *Regulatory Framework*, the SCMC establishes parkland dedication and/or fee requirements for new residential development, helping to ensure that new park and recreation facilities are provided as growth occurs and that individual park and recreation facilities are not overburdened by use.

As described in impact discussion REC-1, the Land Use (LU) Element and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to parks and recreation, including the quality of existing parks and facilities. The General Plan goals, policies, and actions listed in impact discussion REC-1 would serve to minimize potential adverse impacts related to increased park use and deterioration of park facilities.

While future development within the buildout horizon of the proposed project would result in an increased population with an increased demand for parks and recreational facilities, buildout would occur incrementally throughout the 20-year horizon, and future development would be subject to the SCMC regulations and the General Plan goals, policies, and actions listed in impact discussion REC-1. Therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>REC-3</b>	<b>The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.</b>
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A significant impact would result if the proposed project would cause the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

As described in impact discussion REC-1, the Land Use (LU) Element and Parks and Recreation (PR) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to parks and recreation, including the need for expanded or new recreational facilities. The General Plan goals, policies, and actions listed in impact discussion REC-1 would serve to minimize potential adverse impacts related to the need for expanded or new recreational facilities.

## PARKS AND RECREATION

Future development within the buildout horizon of the proposed project would result in an increased population with an increased demand for parks and recreational facilities, buildout would occur incrementally throughout the 20-year horizon. Furthermore, future residential development would be subject to SCMC Chapter 3.34 requiring new residential projects to pay park facility development fees and the General Plan goals, policies, and actions to plan for and provide recreational facilities for existing and future users.

The proposed 2045 General Plan Reset is a policy-level document and does not propose specific development projects. The estimated timing or location of such facilities or the exact nature of these facilities are not known, so project-specific environmental impacts that would occur from their construction and operation cannot be determined at this time. The construction of project-specific recreational facilities would require permitting and review in accordance with City standards, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. Therefore, the impact is considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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REC-4	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative parks and recreation impacts in the area.
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As discussed in Chapter 4, *Environmental Analysis*, of this Draft EIR, the cumulative analysis takes into account growth from development under the proposed project within the City combined with the estimated growth in the service areas of each service provider in the region. Parks and recreation services in the EIR Study Area are provided by the City, and regional parks are provided by the County of San Mateo's Parks and Recreation, California Department of Parks and Recreation, California Department of Fish and Wildlife, and the United States Fish and Wildlife Service.

Future growth in the region would result in increased demand for parks and recreational facilities throughout the EIR Study Area and region. As a result, the local service providers would need to expand and construct additional parks and other recreational facilities to meet the increased demand and maintain existing service levels. State law allows jurisdictions to require additional development to fund park improvements, and the SCMC requires new residential development to pay development impact fees to help fund parks and recreation. Implementation of the General Plan goals, policies, and actions listed under impact discussion REC-1 would also help provide new parklands along with new development. The final location and size of additional facilities would be determined as part of future development activity, and as specific parkland expansion or improvement projects are identified. Additional project-specific environmental analysis would be completed at that future time. As a result, the proposed project would not result in a cumulatively considerable impact to parks and recreational facilities and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## POPULATION AND HOUSING

### 4.13 POPULATION AND HOUSING

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to population and housing, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.13.1 ENVIRONMENTAL SETTING

##### 4.13.1.1 REGULATORY FRAMEWORK

###### State Regulations

###### *California Housing Element Law*

California Housing Element Law<sup>1</sup> includes provisions related to the requirements for housing elements of local government General Plans. Among these requirements, some of the necessary parts include an assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs. Additionally, in order to assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goals, this section of the Government Code calls for local jurisdictions to plan for and allow the construction of a share of the region's projected housing needs, known as the Regional Housing Needs Allocation (RHNA). The City of San Carlos needs to accommodate 2,735 residences in total. The City's 2023-2031 Housing Element was adopted on January 22, 2023.

###### *Housing Opportunity and More Efficiency Act*

The Housing Opportunity and More Efficiency (HOME) Act (Senate Bill [SB] 9) was signed in September 2021 and went into effect in January 2022. The HOME Act streamlines the process for a homeowner to create a duplex or subdivide an existing lot, with the effect of legalizing fourplexes in areas that previously only allowed one home.<sup>2</sup> To be eligible for the streamlining process under the HOME Act, a parcel must meet a specific list of qualifications that protects historic districts, preserves the environmental quality and visual characteristics of communities, and prevents tenants from being displaced. Homeowners would still be required to comply with local zoning requirements, such as, but not limited to, height, floor area ratios, and lot coverage, when developing a duplex as long as they do not physically preclude a duplex.

<sup>1</sup> Government Code Section 65580 through 65589.8.

<sup>2</sup> California Senate, SB 9 (Atkins): The California H.O.M.E. Act, <https://focus.senate.ca.gov/sb9>, accessed May 25, 2023.

## POPULATION AND HOUSING

### *The Housing Crisis Act*

SB 330, or the Housing Crisis Act of 2019, aims to address California's housing shortage by expediting the approval process for housing development of all types, particularly in regions suffering the worst housing shortages and highest rates of displacements. To address the crisis, this bill prohibits some local discretionary land use controls currently in place and generally requires cities to approve all housing developments that comply with current zoning codes and general plans. SB 330 requires that a housing development project only be subject to the ordinances, policies, and standards adopted and in effect when a preliminary application is submitted, notwithstanding the provisions of the HAA or any other law, subject to certain exceptions.

### *State Density Bonus Law*

The State Density Bonus Law (California Government Code Sections 65915-65918) encourages the development of affordable and senior housing, including up to a 50-percent increase in project densities for most projects, depending on the amount of affordable housing provided. Cities and counties are required to grant a density bonus and other incentives or concessions to housing projects which contain one of the following:

- At least 5 percent of the housing units are restricted to very low income residents.
- At least 10 percent of the housing units are restricted to lower income residents.
- At least 10 percent of the housing units in a for-sale common interest development are restricted to moderate income residents.
- 100 percent of the housing units (other than manager's units) are restricted to very low, lower and moderate income residents (with a maximum of 20 percent moderate).
- At least 10 percent of the housing units are for transitional foster youth, disabled veterans or homeless persons, with rents restricted at the very low income level.
- At least 20 percent of the housing units are for low income college students in housing dedicated for full-time students at accredited colleges.
- The project donates at least one acre of land to the city or county for very low income units, and the land has the appropriate general plan designation, zoning, permits and approvals, and access to public facilities needed for such housing.
- The project is a senior citizen housing development (no affordable units required).
- The project is a mobile home park age-restricted to senior citizens (no affordable units required).

### *Assembly Bill 1397*

California's AB 1397 amended Sections 65580, 65583, and 65583.2 of the Government Code, relating to housing by revising what could be included in a local government's inventory of land suitable for residential development. AB 1397 changed the definition of land suitable for residential development to increase the number of multifamily sites. Identified sites must be "available" and "suitable" for residential development and have a "realistic and demonstrated potential" for redevelopment during the planning period. In addition, AB 1397 requires housing element inventory sites to be 0.5 acre to 10 acres, have sufficient infrastructure, or be included in a program to provide such infrastructure, to support and be accessible for housing development. The local government must specify the realistic unit count for each site and whether it can accommodate housing at various income levels.



## POPULATION AND HOUSING

### *Senate Bill 166*

SB 166 (2017) requires a local government to ensure that its housing element inventory can accommodate its share of the regional housing need throughout the planning period. It prohibits them from reducing, requiring, or permitting the reduction of the residential density to a lower residential density than what was used by the California Department of Housing and Community Development for certification of the housing element, unless the city or county makes written findings supported by substantial evidence that the reduction is consistent with the adopted general plan, including the housing element. In such cases, any remaining sites identified in the housing element update must be adequate to accommodate the jurisdiction's share of the regional housing need. A local government may reduce the residential density for a parcel only if it identifies sufficient sites remaining within the housing element as replacement sites, so that there is no net loss of residential unit capacity.

### Regional Regulations

*Plan Bay Area* is the regional transportation plan/sustainable community strategy, as mandated by the Sustainable Communities and Climate Protection Act (SB 375). *Plan Bay Area* lays out a development scenario for the nine-county Bay Area region that works to align transportation and land use planning in order to reduce vehicle miles traveled through modified land use patterns. The current *Plan Bay Area* projects growth and development patterns through 2050 and was adopted in October 2021.<sup>3</sup>

*Plan Bay Area* is prepared and regularly updated by the Metropolitan Transportation Commission (MTC) in partnership with the Association of Bay Area Governments (ABAG), Bay Area Air Quality District (BAAQMD), and the Bay Conservation and Development Commission (BCDC). Each of the agencies has a different role in regional governance. ABAG primarily does regional land use planning, housing, environmental quality, and economic development; MTC is tasked with regional transportation planning, coordinating, and financing; BAAQMD is responsible for regional air pollution regulation; and BCDC's focus is to preserve, enhance, and ensure responsible use of the San Francisco Bay.

As described in Chapter 4, *Environmental Analysis*, of this Draft EIR, *Plan Bay Area* designates Priority Development Areas (PDAs) and Transit Priority Areas (TPAs) throughout the region. PDAs are areas along transportation corridors which are served by public transit that allow opportunities for development of transit-oriented, infill development within existing communities that are expected to host the majority of future development. TPAs are similar in that they are formed within one-half mile around a major transit stop such as a transit center or rail line. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4, the EIR Study Area has one PDA and one TPA. The PDA is called Railroad Corridor and includes El Camino Real and the downtown area. The TPA surrounds El Camino Real and the Caltrain station in San Carlos.

*Plan Bay Area 2050* distributes future growth across the San Francisco Bay Area region in order to meet its GHG emissions reduction, housing, and other performance targets, but it is not intended to override

<sup>3</sup> Metropolitan Transportation Commission and Association of Bay Area Governments, October 2021, *Plan Bay Area 2050*, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed August 9, 2022.

## POPULATION AND HOUSING

local land use control. Cities and counties, not MTC/ABAG, are ultimately responsible for the manner in which their local communities continue to be built out in the future. For this reason, cities and counties are not required to revise their land use policies and regulations, including general plans, to be consistent with the regional transportation plan or an alternative planning strategy. Rather than increase regional land use control, *Plan Bay Area 2050* facilitates implementation by expanding incentives and opportunities available to local jurisdictions to support growth in PDAs. In addition to funding transportation and planning projects in PDAs, *Plan Bay Area 2050* sets the stage for cities and counties to increase the efficiency of the development process, if they choose, for projects consistent with *Plan Bay Area* and other state legislation.<sup>4</sup>

### Local Regulations

#### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.13.3, *Impact Discussion*.

#### *San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to population and housing as follows:

- Title 18, *Zoning Code*, divides the city into distinct zones in order to implement the land use and development policies in the General Plan. Among the primary objectives of the Zoning Code are the regulation of building form, placement, density, and the provision of sufficient parking and open spaces in conjunction with development.
  - Chapter 18.04, *Residential Districts*, serves to preserve, protect, and enhance the character of the City's different residential neighborhoods. It also promotes residential development that is compatible with environmental constraints and neighborhood characteristics.
  - Chapter 18.05, *Mixed-Use Districts*, serves to provide for the orderly, well planned, and balanced development of mixed-use districts.
  - Chapter 18.17, *Affordable Housing programs*, the purpose of this chapter is to Encourage the development and availability of housing affordable to a broad range of households with varying income levels within the City as mandated by State law, California Government Code Section 65580 et seq. This chapter establishes below market rate housing requirements and provides exemptions.

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<sup>4</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, 2022, Frequently Asked Questions: Does *Plan Bay Area* override local land use control?, <https://www.planbayarea.org/2040-plan/quick-facts/faq-page#n4851>, accessed August 31, 2022.

## POPULATION AND HOUSING

### 4.13.1.2 EXISTING CONDITIONS

This section describes the existing population and housing conditions in the City of San Carlos, as well as San Mateo County as a whole, to provide context for the analysis of the proposed project in this EIR. This section uses 2024 data because 2024 is the baseline year for purposes of most analyses in this EIR, as explained in Chapter 4.0, *Environmental Analysis*, of this Draft EIR.

### Population

The EIR Study Area's population grew from 29,648 in 2014 to 30,830 in 2024. As shown in Table 4.13-1, *Total Population, 2014 to 2024*, the population growth in San Carlos is greater than the population growth of San Mateo County during the 10-year period, during which the population of the county decreased.

**TABLE 4.13-1 TOTAL POPULATION, 2014 TO 2024**

	2014	2020	2024	2014-2024 Change	2014-2024 Percent Change
San Carlos EIR Study Area	29,648 <sup>a</sup>	30,738 <sup>a</sup>	30,830	1,182	4%
San Mateo County	751,906	764,442	741,565	(10,341)	(1%)

Note:

a. 2014 and 2020 numbers do not include San Carlos's sphere of influence population.

Source: State of California, Department of Finance, 2024 (accessed), E-5 Population and Housing Estimates for Cities, Counties and the State, 2020-2024, <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/>, accessed September 26, 2024; State of California, Department of Finance, November 2023, E-8 Population and Housing Estimates for Cities, Counties, and the State, April 1, 2010-April 1, 2020, with January Estimates, <https://dof.ca.gov/forecasting/demographics/estimates/estimates-e8-2010-2020/>, accessed September 26, 2024.

### Housing

Between 2014 and 2024, San Carlos experienced steady housing growth. As shown in Table 4.13-2, *Housing Units, 2014 to 2024*, the city's number of housing units grew by approximately 10 percent; this growth was higher than the level of housing growth in San Mateo County as a whole, which was 6 percent during the same period. As of 2024, the average household size in the City of San Carlos is 2.47 persons per household while San Mateo County's average person per household is 2.66 persons per household.<sup>5</sup>

<sup>5</sup> State of California, Department of Finance, 2024 (accessed), E-5 Population and Housing Estimates for Cities, Counties and the State, 2020-2024, <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/>, accessed September 26, 2024.

## POPULATION AND HOUSING

**TABLE 4.13-2 HOUSING UNITS, 2014 TO 2024**

	2014	2020	2024	2014-2024 Change	2014-2024 Percent Change
San Carlos EIR Study Area	11,980 <sup>a</sup>	12,244 <sup>a</sup>	13,250	1,270	10%
San Mateo County	273,287	283,693	289,782	16,495	6%

Note:

a. 2014 and 2020 numbers do not include San Carlos's sphere of influence housing unit count.

Source: State of California, Department of Finance, 2024 (accessed), E-5 Population and Housing Estimates for Cities, Counties and the State, 2020-2024, <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/>, accessed September 26, 2024; State of California, Department of Finance, November 2023, E-8 Population and Housing Estimates for Cities, Counties, and the State, April 1, 2010-April 1, 2020, with January Estimates, <https://dof.ca.gov/forecasting/demographics/estimates/estimates-e8-2010-2020/>, accessed September 26, 2024.

## Regional Growth Projections

*Plan Bay Area 2050* includes growth projections to 2050 for counties within the region. As shown in Table 4.13-3, *San Mateo County Regional Growth Projections, 2015 to 2050*, projections anticipate the number of households in San Mateo County to increase by 48 percent, with jobs projected to increase by 29 percent.

**TABLE 4.13-3 SAN MATEO COUNTY REGIONAL GROWTH PROJECTIONS, 2015 TO 2050**

	2015	2050	Change	Percent Change
Households	265,000	394,000	129,000	48%
Jobs	393,000	507,000	114,000	29%

Source: Plan Bay Area 2050, 2021 January, Projected Household and job Growth, by County, [https://planbayarea.org/sites/default/files/FinalBlueprintRelease\\_December2020\\_GrowthPattern\\_Jan2021Update.pdf](https://planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPattern_Jan2021Update.pdf), accessed on October 17, 2024.

## Regional Housing Needs Allocation

As the San Francisco Bay Area's regional agency, MTC/ABAG calculates the RHNA for jurisdictions in San Mateo County, including San Carlos. Table 4.13-4, *San Carlos Regional Housing Needs Allocation*, shows the RHNA for the current planning period, which is the number of housing units the City of San Carlos would need to accommodate by 2031.

As shown in Table 4.13-4, the housing unit allocations are categorized by household size and income. The household income categories are as follows:

- Very Low Income: Households making less than 50 percent of the area median income.
- Low Income: Households making between 50 and 80 percent of the area median income.
- Moderate Income: Households making between 80 and 120 percent of the area median income.
- Above Moderate Income: Households making more than 120 percent the area median income.

Household median income is calculated based on household size. The median household income for San Carlos for a family of four is \$186,600, based on federal income limits for San Mateo County.

## POPULATION AND HOUSING

**TABLE 4.13-4 SAN CARLOS REGIONAL HOUSING NEEDS ALLOCATION**

RHNA Planning Period	Dwelling Units by Income Category				Total
	Very Low Income	Low Income	Moderate Income	Above Moderate Income	
2023 to 2031	739	425	438	1,133	2,735

Source: City of San Carlos, January 2023, *San Carlos 2023-2031 Housing Element*, [https://cms3.revize.com/revize/sancarlos/Document%20Center/Housing%20Element/03-Needs%20Assessment\\_Final.pdf](https://cms3.revize.com/revize/sancarlos/Document%20Center/Housing%20Element/03-Needs%20Assessment_Final.pdf), accessed September 26, 2024.

### 4.13.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant population and housing impact if it would:

- POP-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- POP-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
- POP-3 In combination with past, present, and reasonably foreseeable projects, result in cumulative population and housing impacts in the area.

### 4.13.3 IMPACT DISCUSSION

POP-1	The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
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As described in Chapter 3, *Project Description*, of this Draft EIR, the proposed 2045 General Plan Reset is a high-level policy document that will replace the existing General Plan 2030 as the City’s overarching policy document that defines a vision for future change and sets the “ground rules” for planned growth. The proposed project considers growth over an approximately 20-year period but does not include specific development proposals. The proposed 2045 General Plan Reset is the policy document that projects the amount of reasonably foreseeable growth given past growth trends and the ability of existing services and infrastructure to support future growth.

The buildout projections evaluated in this EIR include housing development associated with current development projects, development of the sites in the City’s 2023-2031 Housing Element Sites Inventory, development of accessory dwelling units and units under SB 9 as allowed under State housing law, and estimated future housing development under future RHNA cycles. Future housing development in the

## POPULATION AND HOUSING

EIR Study Area is projected to occur primarily on infill parcels near Downtown, along the El Camino Real corridor, along Old County Road between Holly Street and Terminal Avenue, and along East San Carlos Avenue. Most of the commercial growth is expected to occur in the Downtown area. Most of the office growth is expected in the Downtown and Northeast areas. Research and development and industrial growth would be limited to the east side area of San Carlos. In addition, these areas contain one PDA, which is expected by ABAG to be where future growth will be concentrated. Given that future development would be concentrated in areas currently served by public services and infrastructure, implementation of the proposed project would require less extension and improvement of infrastructure than if development were to occur on “greenfield” sites. Therefore, the proposed project would not induce substantial, unplanned population growth directly or indirectly in any particular location but instead includes policy guidance for expected incremental planned growth through 2045.

The EIR Study Area has a population of approximately 30,830, with 13,250 housing units as of 2024. As shown in Table 3-1, *Proposed 2045 General Plan Reset Buildout Projections In The EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR, the proposed 2045 General Plan Reset plans for an overall increase of 8,300 housing units and 15,620 residents in the EIR Study Area by 2045. This equates to a 63-percent increase in housing units and a 50-percent increase in total population over the 20-year horizon of the proposed 2045 General Plan Reset. However, approximately 32 percent of this residential development projection is from the City’s current 2023-2031 RHNA allocation of 2,735 units, which is housing capacity required by the California Housing Law and not by the City. Over the buildout horizon of the proposed project, it is assumed that the City’s RHNA during future RHNA cycles would be similar to recent RHNA amounts, and this is accounted for in the 2045 General Plan Reset buildout projections.

As shown in Table 4.13-3, *Plan Bay Area 2050* anticipates a 48-percent increase in households and a 29-percent increase in jobs in San Mateo County in 2050. As described in Chapter 3, *Project Description*, of this Draft EIR, development potential under the proposed 2045 General Plan would result in a 50-percent increase in total population, 63-percent increase in housing units, and 128-percent increase in jobs. As described in Section 4.13.1.2, *Existing Conditions*, recent development trends have shown that development in San Carlos has outpaced that of San Mateo County as a whole. Additionally, the net increase in households for San Carlos is only 6 percent of the regional household growth accounted for in San Mateo County<sup>6</sup> and the net increase in jobs in San Carlos is 23 percent of the job growth accounted for the county.<sup>7</sup> Therefore, projected housing and job development would not exceed the projections of *Plan Bay Area 2050* and the proposed project would not be expected to induce unplanned population growth as a result of housing or job growth.

The Land Use (LU) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to population and housing, including population growth. In addition to the goals, policies, and actions of the adopted 2023-2031 Housing Element, the following General Plan goals, policies, and actions would serve to support population growth:

- **Goal LU-1:** Ensure a sustainable land use pattern.

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<sup>6</sup> 8,300 net new housing units in San Carlos/129,000 net new households in San Mateo County = 6 percent.

<sup>7</sup> 26,530 net new jobs in San Carlos/114,000 net new jobs in San Mateo County = 23 percent.

## POPULATION AND HOUSING

- **Policy LU-1.2:** Encourage development of higher density housing and support additional job growth within the TOD corridor while being sensitive to surrounding uses.
- **Goal LU-5:** Support and maintain land uses that contribute to a vibrant and resilient local economy and support the fiscal well being of the City.
  - **Policy LU-5.11:** Continue to require developers to pay their fair share of the capital cost of public facilities through appropriate development impact and utility connection fees.
  - **Action LU-5.3:** Review impact fees for new development to ensure that fees are appropriate to contribute to the cost of providing public facilities and services.
  - **Action LU-5.4:** Ensure that new development is not a financial burden on municipal service levels by evaluating the fiscal impact of all new projects and establishing preferences for projects that generate sufficient revenue to offset increased operation and maintenance costs, consistent with other local, state and federal regulations.

Implementation of the proposed 2045 General Plan Reset itself would not introduce a substantial amount of unplanned population in the EIR Study Area and is instead the overriding policy document that plans for such growth. As determined in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, there are no existing infrastructure deficiencies identified in the EIR Study Area, and no future deficiencies are likely to occur as a result of the proposed project. Further, Chapter 4.12, *Parks and Recreation*, and Chapter 4.14, *Public Services*, of this Draft EIR determine that population growth under the proposed project would not result in a parks, recreation, or public service deficiency. Therefore, implementation of the proposed project would not induce substantial unplanned population growth and would not necessitate the construction of additional infrastructure, and the impact is *less than significant*.

**Significance without Mitigation:** Less than significant.

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POP-2	The proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
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Displacement is typically considered substantial in cases where major development such as a freeway or a large-scale redevelopment would result in the displacement of large amounts of existing housing, such that the construction of replacement housing is necessary.

Future development within the buildout horizon of the proposed project is expected to result in an increase of approximately 8,300 housing units in the EIR Study Area over an approximately 20-year horizon. As identified under impact discussion POP-1, approximately 32 percent of the projected 8,300 housing units anticipated by 2045 are from the City's current 2023-2031 RHNA allocation of 2,735 units, which is housing capacity required by the California Housing Law and not by the City. Future housing development in the EIR Study Area is projected to occur primarily on infill parcels near Downtown, along the El Camino Real corridor, along Old County Road between Holly Street and Terminal Avenue, and along East San Carlos Avenue. Most of the commercial growth is expected to occur in the Downtown

## POPULATION AND HOUSING

area. Most of the office growth is expected in the Downtown and Northeast areas. Research and development and industrial growth would be limited to the east side area of San Carlos. Due to the built-out nature of the EIR Study Area, future development would occur largely through redevelopment activities; therefore, it is possible that future development could displace an unknown number of existing residents or housing.

The Land Use (LU) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to population and housing, including displacement. In addition to the goals, policies, and actions of the adopted 2023-2031 Housing Element, the following General Plan goal, policy, and action would serve to minimize impacts related to population and housing displacement:

- **Goal LU-5:** Support and maintain land uses that contribute to a vibrant and resilient local economy and support the fiscal well being of the City.
  - **Policy LU-5.6:** Strive for a balanced ratio of jobs and housing units.
  - **Action LU-5.5:** Routinely review the jobs to housing balance and make recommendations to correct imbalances.

Future development is anticipated to result in a net increase in density and utilization of infill or underutilized sites in existing urban areas. Therefore, displacement of people or housing would be temporary as redevelopment occurs. While the proposed 2045 General Plan Reset does focus on infill development which may occur as redevelopment, the proposed 2045 General Plan Reset does not call for any large-scale development that would be considered to result in substantial displacement of existing housing. The scale of temporary removal of housing would be typical for urban development projects. Further, redevelopment in the EIR Study Area would occur largely on sites that are underutilized and/or with older structures that are past their useful life, and small levels of displacement that may occur would be addressed through compliance with the General Plan goal, policy, and action listed above. Therefore, any potential displacement of persons in the EIR Study Area would not be substantial, and the impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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POP-3	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative population and housing impacts in the area.
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The context for the cumulative population and housing impacts would be future development under the proposed project combined with development on lands adjacent to the EIR Study Area. As described in impact discussions POP-1 and POP-2, implementation of the proposed project would not induce a substantial amount of unplanned population growth or growth for which inadequate planning has occurred, or displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. The proposed 2045 General Plan Reset would provide adequate planning to accommodate the proposed new increase in growth in the EIR Study Area. Therefore, the



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proposed project would not result in a cumulatively considerable impact to population and housing, and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## POPULATION AND HOUSING

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## 4.14 PUBLIC SERVICES

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to public services, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

This chapter covers the following public services:

- Fire protection
- Police
- Schools
- Libraries

### 4.14.1 FIRE PROTECTION SERVICES

#### 4.14.1.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

###### *State Regulations*

###### California Government Code

Section 65302 of the California Government Code requires General Plans to include a Safety Element, which must include an assessment of wildland and urban fire hazards. The Environmental Safety and Public Services (ESPS) Element of the existing General Plan 2030 satisfies this requirement.

###### California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. The Office of the State Fire Marshal supports CAL FIRE's mission to protect life and property through fire prevention engineering programs, law and code enforcement, and education.

###### California Building Code

The State of California provides a minimum standard for all building design except detached one- and two-family residential dwellings and townhouses not more than three stories above grade plane, through Title 24, Part 2, of the California Code of Regulations (CCR), commonly referred to as the "California Building Code" (CBC). The CBC incorporates, by adoption, the International Building Code of the International Code Council, with California amendments, and is updated every three years, with supplements published in intervening years. It is adopted by the State, and can be modified on a jurisdiction-by-jurisdiction basis, based on local geologic, climatic, and topographic conditions. Typical

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fire safety requirements of the CBC include the installation of sprinklers in most new buildings, including all high-rise buildings, all residential buildings and other facilities; fire resistant rated construction and construction in designated wildland fire hazard severity zones; fire alarm systems and exiting requirements; and fire safety requirements during construction. The CBC also establishes structural stability, and seismic safety for buildings and structures.

### California Residential Code

The State of California provides a minimum standard for all building design of detached one- and two-family residential dwellings and townhouses not more than three stories above grade plane, through Title 24, Part 2.5, of the CCR, commonly referred to as the “California Residential Code.” The California Residential Code incorporates, by adoption, the International Residential Code of the International Code Council, with California amendments, and is updated every three years. Like the CBC, it is modified by the City, as needed, to address local conditions.

### California Fire Code

The California Fire Code (CFC) incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. The CFC is the official fire code for the State of California (State) and all political subdivisions. It is found in CCR Title 24, Part 9, and, like the CBC, it is revised and published every three years by the California Building Standards Commission. Also like the CBC, the CFC is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions.

The CFC is a model code that regulates minimum fire safety regulations for new and existing buildings, facilities, storage, and processes, including emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Typical fire safety requirements include the installation of sprinklers in most new buildings, including all high-rise buildings, all residential buildings, and other facilities; fire resistant rated construction; construction in designated wildland fire hazard severity zones; fire alarm systems and exiting requirements; fire safety requirements during construction; the regulation of hazardous materials not covered by the unified program (described below); and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

### Mitigation Fee Act (California Government Code 66000-66008)

Assembly Bill (AB) 1600, the Mitigation Fee Act, requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied. This act became enforceable on January 1, 1989.

## *Local Regulations*

### San Carlos General Plan

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.14.1.3, *Impact Discussion*.

### San Carlos Municipal Code

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to fire protection as follows:

- Chapter 15.04.040, *California Building Code*, adopts the 2022 CBC with amendments and is referred to as the City of San Carlos Building Code.
- Chapter 15.04.110, *California Fire Code*, adopts the 2021 International Fire Code and the 2022 California Fire Code with amendments, referred to as the San Carlos Fire Ordinance.

### Fire Inspection Fees

Fire Inspection Fees are generated by the Redwood City/San Carlos Fire Department on an annual basis and are \$292 for Fiscal Year 2024-25.<sup>1</sup> The primary goal for the Annual Fire and Life Safety Inspection Program is to reduce the number of deaths, injuries and property losses from fire.

## Existing Conditions

The City of San Carlos is served by the Redwood City-San Carlos Fire Department (RC-SCFD). The RC-SCFD, a joint powers and governmental agency, provides fire and emergency response services to the cities of Redwood City and San Carlos. The RC-SCFD is responsible for fire response, vehicle accidents, public assistance, medical emergencies, water rescue, and hazardous material response. In addition, the RC-SCFD is also responsible for disaster preparedness and other services, such as building plan review, fire prevention, and fire hydrant testing.

Out of the seven stations with the RC-SCFD, two are with San Carlos: Station 13 and Station 16. Station 13 is staffed with a captain, a firefighter, and a firefighter/paramedic and houses Engine 13, Reserve Engine 113, and Reserve Battalion 103. Station 16 was recently replaced with a new station.<sup>2</sup>

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<sup>1</sup> City of San Carlos, 2024 (accessed), Fire Fees, [https://cms3.revize.com/revize/sancarlos/city\\_hall/departments\\_and\\_divisions/administrative\\_services/finance/city\\_fees\\_and\\_cost\\_of\\_services/fire\\_fees.php](https://cms3.revize.com/revize/sancarlos/city_hall/departments_and_divisions/administrative_services/finance/city_fees_and_cost_of_services/fire_fees.php), accessed on October 16, 2024.

<sup>2</sup> Redwood City, Fire Stations, 2024 (accessed), <https://www.redwoodcity.org/departments/fire-department/about-the-department/fire-stations>, accessed on October 16, 2024.

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According to the Standards of Cover Study and Community Risk Assessment for the Redwood City Fire Department, the RC-SCFD is currently challenged in three ways: response times, rising rate of medical incidents, and limitations associated with having a single ladder truck and Battalion Chief. Out of five response components, which include call processing/dispatch, crew turnout, first-unit travel, first unit call to arrive, and Effective Response Force (ERF) call to arrive, the RC-SCFD exceeds the response time best practice in all but one area—call processing/dispatch. Additionally, the RC-SCFD is challenged by the rising demand for low-acuity EMS responses for patients that seldom need immediate emergency room care and reduce the available capacity for serious, life threatening fires and EMS events. Lastly, due to the RC-SCFD only having one ladder truck and Battalion Chief / Incident Commander, response times are affected. To improve this, the Standards of Cover Study and Community Risk Assessment for the Redwood City Fire Department recommends that a second ladder truck and Battalion Chief / Incident Commander be added at Station 13 in San Carlos.<sup>3</sup>

### 4.14.1.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant fire protection services impact if it would:

- PS-1 Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection 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.
- PS-2 In combination with past, present, and reasonably foreseeable projects, result in cumulative fire protection service impacts in the area.

### 4.14.1.3 IMPACT DISCUSSION

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PS-1	The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection 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.
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New development in the EIR Study Area would be served by the RC-SCFD. A significant impact to the RC-SCFD would result if, in order for RC-SCFD to adequately serve the area, increased demand in the EIR Study Area would require the construction of new facilities or the expansion of existing facilities, the construction or operation of which would cause significant environmental impacts.

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<sup>3</sup> Citygate Associates LLC, May 2023, Standards of Cover Study and Community Risk Assessment for the Redwood City Fire Department.

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The proposed project plans for an approximately 20-year buildout horizon. While an increase in demand for fire protection services would be gradual and in line with incremental population growth, which would occur with or without adoption of the proposed project, the RC-SCFD has identified that additional staff should be considered with the increase in population.<sup>4</sup> As previously described, the RC-SCFD response times exceed the best practice benchmarks, especially for travel time and multi-unit responses.<sup>5</sup> Additionally, RC-SCFD has been recommended to add a ladder truck and Battalion Chief at Station 13 in San Carlos to improve coverage.<sup>6</sup>

Future development would include new housing and non-residential development, with associated increases to resident and employee population served by the RC-SCFD. Future development under the proposed project would be required to comply with CFC which regulates, among other topics, hazardous material handling, emergency access, and fire protection systems, including automatic sprinkler system, fire extinguishers, and fire alarms. The City would review plans and conduct construction inspections to ensure that new development complies with existing building and fire code requirements. Compliance with the CFC would ensure any new development proposed in the EIR Study Area meets the most current building and fire codes, thereby increasing safety of the buildings, and reducing the likelihood of a fire emergency, subsequently reducing demand on RC-SCFD services.

The Land Use (LU) and Environmental Safety and Public Services (ESPS) Elements of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to public services, including fire protection services. The following General Plan goals, policies, and actions would serve to minimize potential adverse impacts related to performance objectives for fire protection services:

- **Goal LU-4:** Ensure that any annexation of lands occurs in an orderly and systematic manner and adheres to all City goals, policies, and standards.
  - **Policy LU-4.2:** Annexation of all or portions of unincorporated residential areas shall only be permitted when public services and facilities meeting City standards are available to the lands proposed for inclusion in the city. All streets, sewage and drainage systems and police and fire protection must meet City standards. In no case shall the city taxpayer be burdened with paying for additional services for newly annexed lands. Funds for these services shall be generated through property tax revenue, the establishment of special assessment districts or they shall be paid for by the developer/property owner.
- **Goal LU-5:** Support and maintain land uses that contribute to a vibrant and resilient local economy and support the fiscal well being of the City.
  - **Action LU-5.3:** Review impact fees for new development to ensure that fees are appropriate to contribute to the cost of providing public facilities and services.

<sup>4</sup> Redwood City and San Carlos Fire Departments, correspondence with PlaceWorks, November 2024.

<sup>5</sup> Redwood City and San Carlos Fire Departments, correspondence with PlaceWorks, November 2024.

<sup>6</sup> Redwood City and San Carlos Fire Departments, correspondence with PlaceWorks, November 2024.

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- **Action LU-5.4:** Ensure that new development is not a financial burden on municipal service levels by evaluating the fiscal impact of all new projects and establishing preferences for projects that generate sufficient revenue to offset increased operation and maintenance costs, consistent with other local, state and federal regulations.
- **Goal ESPS-3:** Agency Coordination: A resilient San Carlos is well prepared to minimize risks associated with wildfire.
  - **Policy ESPS-3.1:** Promote and improve, as necessary, inter-jurisdictional fire prevention assessment, planning, and projection; and consultation and communication regarding disaster or emergency plans of San Carlos and Mutual Aid with adjacent agencies including but not limited to San Mateo County, Redwood City, Belmont, and CAL FIRE.
  - **Policy ESPS-3.2:** Conduct annual training for fire, emergency medical, and police staff including cross training with adjacent automatic or mutual aid emergency response departments. Regularly maintain, test, and update training and equipment to meet current standards.
  - **Policy ESPS-3.3:** Ensure adequate Fire Department resources (fire stations, personnel, and equipment) to meet response time standards, keep pace with growth, and provide a high level of service to the community.
  - **Policy ESPS-3.4:** Locate essential public facilities out of high-risk, wildfire-prone areas including the VHFHSZ unless mitigation measures, above the minimum fire protection standards, are installed.
  - **Policy ESPS-3.14:** Provide adequate evacuation routes and access for fire and emergency service vehicles to all San Carlos areas.
- **Goal ESPS-7:** Continue effective emergency response procedures to ensure public safety in the event of natural or man-made disasters.
  - **Policy ESPS-7.9:** Evaluate safety service limitations on an annual basis to provide for adequate levels of service.
- **Goal ESPS-13:** Ensure adequate public services and high quality design of public facilities to make San Carlos a safe, enjoyable and quality community in which to live, work and shop.
  - **Policy ESPS-13.2:** Establish and regularly monitor levels of service of San Carlos' public facilities and services.
  - **Policy ESPS-13.8:** Approve rezoning and development permits only when adequate services are available, or when a program to provide services has been approved by the applicable district and the City.
  - **Policy ESPS-13.9:** Ensure that adequate public services and facilities are planned and constructed to accommodate the population of the city.
  - **Action ESPS-13.1:** Define acceptable service levels for San Carlos' public facilities and services.

In addition to the General Plan goals and policies listed above, see Chapter 4.18, *Wildfire*, of this Draft EIR, for a complete list of goals, policies, and actions that would minimize risk of wildfire, thereby reducing demand on RC-SCFD services.



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While future development under the proposed project would increase demand on fire protection services, growth would occur incrementally. Individual project plan review by the RC-SCFD, compliance with the regulations described under Section 4.14.1.1, *Environmental Setting*, and consistency with the General Plan goals, policies, and actions listed above would ensure that the RC-SCFD is involved as future development is allowed under the proposed project. RC-SCFD has indicated that adding a second ladder truck and Battalion Chief / Incident Commander at Station 13 in San Carlos would be necessary to accommodate future needs. Future construction of new fire facilities, or renovation or expansion of existing facilities, would be subject to separate project-level environmental review pursuant to the California Environmental Quality Act (CEQA), as required, to identify potential environmental impacts and mitigation measures as needed. The estimated timing or location of these future fire facility improvements are not known at this time, so project-specific environmental impacts that could occur from their construction and operation cannot be determined at this time. It would be speculative to assess the physical effects of those future construction projects and the project's potential contribution to those effects. Pursuant to Section 15145 of the State CEQA Guidelines, if a particular impact is too speculative for evaluation, no further evaluation is required. Compliance with existing regulations, General Plan goals, policies, and actions, and future project-level environmental review would ensure that impacts on fire protection facilities would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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PS-2	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative fire protection service impacts.
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As discussed in Chapter 4, *Environmental Analysis*, of this Draft EIR, this cumulative analysis takes into account growth from development under the proposed project within the EIR Study Area combined with the estimated growth in the service area of each service provider. In the case of fire protection, this would be the service area of the RC-SCFD.

Compliance with State and local regulations described under Section 4.14.1.1, *Environmental Setting*, and the General Plan goals, policies, and actions listed in impact discussion PS-1, would ensure that fire protection services continue to adequately serve the EIR Study Area. Likewise, the Redwood City General Plan has policies and programs that encourage coordination between the county and fire protection agencies in order to identify the most efficient delivery of fire protection services, reduce response times, and have a uniform database and communication system. This is exemplified in the Public Safety Element (PS) of the Redwood City General Plan, Program PS-60, Inter-Agency Emergency Preparedness/Mutual Aid. This program would ensure that Redwood City works with other local cities, San Mateo County, regional organizations, and State agencies to ensure emergency preparedness and fire suppression services are provided in an efficient and coordinated manner. Additionally, this program would continue to participate in mutual aid multi-agency agreements. This type of coordination will provide a coordinated approach to fire protection services and ensure that there is adequate coverage in the RC-SCFD service area.

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Further, because the proposed project is program level, and because future development would be required to undergo project review at the time of project application, to the extent applicable, future development would be assessed for impacts to fire protection services. With adequate planning in place in both the city limit and the RC-SCFD service area, the proposed project would not result in a cumulatively considerable impact to fire protection services and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### 4.14.2 POLICE SERVICES

#### 4.14.2.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

###### *State Regulations*

AB 1600, the Mitigation Fee Act, requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied. This act became enforceable on January 1, 1989.

###### *Local Regulations*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.14.2.3, *Impact Discussion*.

##### Existing Conditions

The San Mateo County Sheriff's Office (SMCSO) has been contracted to provide law enforcement services to the City of San Carlos since October 2010. Within the San Mateo County Sheriff's Office, the San Carlos Police Bureau assists with activities in San Carlos and is located at 600 Elm Street. Services that the San Carlos Police Bureau provides include patrol services, Report Releases & Requirements, Vehicle Releases & Requirements, Visa/Clearance Letters & Booking Chronology Requirements. Within the San Mateo County Sheriff's Office there are 800 employees and 98,778 calls for service in 2023.

The national average for the standard ratio of officers per 1,000 residents is 2.4 sworn police officers per 1,000 residents. The department is currently falling short of meeting this national standard.<sup>7</sup>

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<sup>7</sup> Communication with Evanka Swampillai-Coss, Management Analyst of the San Mateo County Sheriff's Office on 9/30/24.

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The national standard for meeting priority 1 calls is 5 minutes or less. The police department is currently meeting this response time standard; the average response time in 2023 was 4 minutes 23 seconds.<sup>8</sup>

The SMCSO has indicated that existing stations are adequate and there are no existing plans for expansion or relocation.<sup>9</sup>

### 4.14.2.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant police services impact if it would:

- PS-3 Result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, need for new or physically altered police 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 services.
- PS-4 In combination with past, present, and reasonably foreseeable projects, result in cumulative police service impacts in the area.

### 4.14.2.3 IMPACT DISCUSSION

PS-3	The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, need for new or physically altered police 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 services.
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Due to the built-out nature of San Carlos, future development would occur in previously developed areas. These locations are currently served by the SMCSO and future development or redevelopment in the EIR Study Area is not anticipated to expand SMCSO's service area, which could increase response times or disrupt other performance objectives.

The proposed project plans for an approximately 20-year buildout horizon. While an increase in demand for police protection services would be gradual and in line with incremental population growth, which would occur with or without adoption of the proposed project, the SMCSO has identified that additional deputies would be necessary with the increase in population.<sup>10</sup> As previously described, the SMCSO staffing ratios are below the national staffing average of 2.4 sworn personnel per 1,000 residents.<sup>11</sup> The SMCSO has indicated that, while existing stations are adequate and there are no existing plans for expansion or relocation, with the projected increase in population the station will not be sufficient to

<sup>8</sup> Communication with Evanka Swampillai-Coss, Management Analyst of the San Mateo County Sheriff's Office on 9/30/24.

<sup>9</sup> San Mateo County Sheriff's Office, correspondence with PlaceWorks, October 2024.

<sup>10</sup> San Mateo County Sheriff's Office, correspondence with PlaceWorks, October 2024.

<sup>11</sup> San Mateo County Sheriff's Office, correspondence with PlaceWorks, October 2024.

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meet the needs of an increased number of personnel.<sup>12</sup> Therefore, SMCSO has identified that the establishment of a substation on the East Side of San Carlos sometime in the future would improve response times and accommodate staff increases.<sup>13</sup>

The SMCSO is funded by the City's General Fund, which future development would support through the payment of taxes and development fees, among other fees. Future development in San Carlos would be required to pay taxes and development fees, amongst other fees, that would contribute to the General Fund to support the SMCSO. Procurement of additional police equipment would occur as needed through the City's annual budgeting process, which financially supports the procurement of needed equipment.

As discussed in impact discussion PS-1, the Land Use (LU) and Environmental Safety and Public Services (ESPS) Elements of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to public services, including police services. The General Plan goals, policies, and actions listed in impact discussion PS-1 would serve to minimize potential adverse impacts related to police services.

While the proposed project would increase demand on police protection services, growth would occur incrementally. SMCSO has indicated that existing stations would be adequate to accommodate future needs and no specific plans to construct new facilities have been developed. However, SMCSO has identified that the proposed project would increase demand which could lead to the construction of a new facility or the expansion of the current one. The estimated timing or location of future facility improvements are not known at this time, so project-specific environmental impacts that could occur from their construction and operation cannot be determined at this time. Therefore, it would be speculative to assess the physical effects of those future construction projects and the project's potential contribution to those effects. Pursuant to Section 15145 of the State CEQA Guidelines, if a particular impact is too speculative for evaluation, no further evaluation is required. If needed, future construction of new or renovated police stations would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed to reduce potential environmental impacts. Therefore, impacts on police service facilities would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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PS-4	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative police protection service impacts.
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Cumulative police service impacts would occur from future development within the buildout horizon of the proposed project in the service area of SMCSO. The proposed project does not include specific

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<sup>12</sup> San Mateo County Sheriff's Office, correspondence with PlaceWorks, October 2024.

<sup>13</sup> San Mateo County Sheriff's Office, correspondence with PlaceWorks, November 2024.

development projects, as it serves as a guide for future development in the city. Future development projects are currently and will continue to be assessed for impacts to police protection services.

It is unlikely that approval of the General Plan and certification of the EIR would immediately increase the degree or incidence of need for police protection services because future development would occur incrementally throughout the approximately 20-year buildout horizon. Additionally, compliance with the General Plan goals, policies, and actions discussed in impact discussion PS-3 would reduce the impact that future development could have on the SMCSO. Additionally, development would occur in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing residential and residential-serving development and which are covered by existing police services. Therefore, the proposed project would not result in a cumulatively considerable impact to police protection services and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### 4.14.3 SCHOOLS

#### 4.14.3.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

###### *State Regulations*

###### Senate Bill 50

SB 50 (funded by Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. In setting the fees, school districts must prepare nexus studies to demonstrate a reasonable connection between new development and the need for school improvements. The fees may only be used to finance the construction or modernization of school facilities. The fee application level depends on whether State funding is available, whether the school district is eligible for State funding, and whether the school district meets certain additional criteria involving bonding capacity, year-round school, and the percentage of moveable classrooms in use.

###### California Government Code Section 65995

SB 50 amended California Government Code Section 65995, which contains limitations on Education Code Section 17620, the statute that authorizes school districts to assess development fees within school district boundaries. Government Code Section 65995(b)(3) requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. According to California Government Code Section 65995(3)(h), the payment of statutory fees is “deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental

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organization or reorganization...on the provision of adequate school facilities.” The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

### Mitigation Fee Act

AB 1600, the Mitigation Fee Act, requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied. This act became enforceable on January 1, 1989.

### *Local Regulations*

### San Carlos General Plan

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.14.3.3, *Impact Discussion*.

### San Carlos School District Long Range Facilities Master Plan

Approved in 2023, the San Carlos School District (SCSD) Long Range Facilities Master Plan provides a continuous basis for planning educational facilities that will meet the changing needs of a community. Within the SCSD Facilities Master Plan is a snapshot of needs, vision, and a plan for implementation.<sup>14</sup> This includes enrollment, capacity and utilization analysis, a facility conditions assessment, and site master plans for all the schools in the district.

### Sequoia Union High School District Facilities Master Plan

The Sequoia Union High School District (SUHSD) Facilities Master Plan establishes a clear road map for using, improving, and creating new campus facilities that best fit the needs of each school. SUHSD Facilities Master Plan contains information about the how each facility was assessed, as well as the master plans for each school within the district.

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<sup>14</sup> San Carlos School District, 2023, Long Range Facility Master Plan, <https://4.files.edl.io/62c2/09/21/23/233526-0bd38e0d-9d1a-4560-995e-c73e552a05fa.pdf>, accessed on September 30, 2024.

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### Measure W

On the ballot in 2022, Measure W supported authorizing SUHSD to issue \$591 million in bonds to repair and upgrade the infrastructure and classrooms of local high schools, levying \$14 per \$100,000 in assessed value.<sup>15</sup> This measure was passed.

### Development Impact Fees

The school districts within San Carlos collect development impact fees and they are calculated on new or added square footage from the outside wall dimensions of assessable space. Once the impact fees are collected, 60 percent goes to the feeder elementary school district, and 40 percent goes to SUHSD.<sup>16</sup>

The current fees are as follows:<sup>17</sup>

- Level 1 – Commercial/Industrial: \$0.84 / sq. ft.
- Level 2 – Residential: \$5.17 / sq. ft.

## Existing Conditions

The following describes current conditions and potential impacts of the project with regard to schools in San Carlos. The City of San Carlos is served by two different school districts: SCSD and SUHSD.

### *San Carlos School District*

There are eight schools within SCSD and 12 preschool classes in the Early Learning Center/Preschool. The nine sites and their associated grade levels are listed below:

- San Carlos Early Learning Center/Preschool – 2 to 4 year olds, in 12 classes across 4 elementary sites
- Arundel Elementary – Transitional Kindergarten (TK) to 3rd grade
- Brittan Acres Elementary – TK to 3rd grade
- Heather Elementary – TK to 3rd grade
- White Oaks Elementary – TK to 3rd grade
- Arroyo Upper Elementary – 4th to 5th grade
- Mariposa Upper Elementary – 4th to 5th grade
- Central Middle School – 6th to 8th grade
- Tierra Linda Middle School – 6th to 8th grade

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<sup>15</sup> Ballotpedia, 2024 (accessed), Sequoia Union High School District, California, Measure W, Bond Measure, [https://ballotpedia.org/Sequoia\\_Union\\_High\\_School\\_District,\\_California,\\_Measure\\_W,\\_Bond\\_Measure\\_\(November\\_2022\)](https://ballotpedia.org/Sequoia_Union_High_School_District,_California,_Measure_W,_Bond_Measure_(November_2022)), accessed on September 30, 2024.

<sup>16</sup> Governing Board of the Sequoia Union High School District, 2024, Resolution No. 011, <https://www.seq.org/documents/Departments/Admin%20Services/Maintenance%20and%20Operations/Resolutions%20and%20Justification%20Reports/RESOLUTION-No.-011-INCREASE-IN-SCHOOL-FACILITIES-FEES-AND-ADOPTION-OF-CEQA-NOTICE-OF-EXEMPTION-3-6-24.pdf>, accessed on October 16, 2024.

<sup>17</sup> Sequoia Union High School District, 2024, Level 1 Developer Fee Study for Sequoia Union High School District, <https://www.seq.org/documents/Departments/Admin%20Services/Maintenance%20and%20Operations/Resolutions%20and%20Justification%20Reports/Developer-Fee-Justification-Study-March-2024.pdf>, accessed October 21, 2024.

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The San Carlos Education Foundation helps fund programs local public schools can offer students. The 2023-2024 funding goal was \$3.7 million. Programs that are funded through the foundation include: school PTA, technology staff and equipment, library and literacy, music programs, emotional health and wellness, physical education, innovation, principal flex funds.

In 2023, a Long-Range Facilities Master Plan was completed for the school district but, in correspondence with SCSD, certain inconsistencies were noted. Within the SCSD Facilities Master Plan a surplus of 66 classrooms across SCSD sites were noted. According to the SCSD, this analysis is based on the State Funding Program's loading standards, which calculate maximum capacity without factoring in actual space utilization or local educational programming.<sup>18</sup> The SCSD Facilities Master Plan also does not include TK classroom usage.<sup>19</sup> With the statewide mandate of full implementation of TK beginning in the 2025-26 school year, SCSD is projecting to need a total of 13 to 14 TK classrooms.<sup>20</sup>

The current enrollment of SCSD is 2,875 students, which is 177 more students than the 2,698 projected in the most recent Enrollment Projection Consultants Demographic Report from February 2023.<sup>21</sup> SCSD is at capacity for grade-levels TK through 5.<sup>22</sup> In fall of 2025, TK will be planned to move to a 10:1 ratio which is anticipated to bring in an additional 50 to 100 students in the grade level, exceeding capacity.<sup>23</sup> In preparation for this, the TK classroom space has expanded by installing three modular classrooms in Arundel, Brittan Acres, and Heather Elementary Schools during the summer of 2024.<sup>24</sup>

### *Sequoia Union High School District*

SUHSD serves San Carlos, Belmont, and Redwood City high school students. Overall, SUHSD serves approximately 9,741 students on the Midpeninsula with seven schools.<sup>25</sup> Most of the students within San Carlos attend Carlmont High, with some of the students attending Sequoia High.<sup>26</sup>

The capacity for Carlmont High School is 2,343 students. Its current enrollment is 2,360 students, exceeding its capacity by 17 students.<sup>27</sup> The capacity for Sequoia High School is 2,515 students. Its current enrollment is 1,903 students, so it is not exceeding its capacity.<sup>28</sup>

For the purposes of district planning, SUHSD utilizes student generation rates of 0.14 for single-family detached units, 0.09 for single-family attached units, and 0.10 for multi-family units.

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<sup>18</sup> San Carlos School District, correspondence with PlaceWorks, October 2024.

<sup>19</sup> San Carlos School District, correspondence with PlaceWorks, October 2024.

<sup>20</sup> San Carlos School District, correspondence with PlaceWorks, October 2024.

<sup>21</sup> San Carlos School District, correspondence with PlaceWorks, October 2024.

<sup>22</sup> San Carlos School District, correspondence with PlaceWorks, October 2024.

<sup>23</sup> San Carlos School District, correspondence with PlaceWorks, October 2024.

<sup>24</sup> San Carlos School District, correspondence with PlaceWorks, October 2024.

<sup>25</sup> California Department of Education, 2020-21 Enrollment By Ethnicity: Sequoia Union High Report (41-69062), <https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthGrd.aspx?cds=4169062&aggllevel=District&year=2023-24>, accessed October 16, 2024.

<sup>26</sup> Sequoia Union High School District, correspondence with PlaceWorks, October 2024.

<sup>27</sup> Sequoia Union High School District, correspondence with PlaceWorks, October 2024.

<sup>28</sup> Sequoia Union High School District, correspondence with PlaceWorks, October 2024.



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Funding for SUHSD comes from Local Control Funding Formula Sources and federal, State, and local sources.<sup>29</sup> SUHSD also collects development impact fees, which fund improvements and new facilities to mitigate impacts from new development.

SUHSD has a Facilities Master plan that was completed in 2023 and sets a vision for the next ten years of future facility improvements.<sup>30</sup> Among the various school improvements that are outlined in the plan, Carlmont High School was identified in five areas for improvement, including new construction, renovation, site/sports projects, and infrastructure.<sup>31</sup> For Sequoia High School, the Master Plan anticipates a new classroom building and modernization of existing buildings.<sup>32</sup>

### 4.14.3.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant schools impact if it would:

- PS-5 Result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.
- PS-6 In combination with past, present, and reasonably foreseeable projects, result in cumulative schools impacts in the area.

### 4.14.3.3 IMPACT DISCUSSION

PS-5	The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.
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A significant impact would result if, in order for the school districts to adequately serve the EIR Study Area, increased school enrollment would require the construction of new facilities or the expansion of existing schools, the construction or operation of which would cause significant environmental impacts.

Future development within the buildout horizon of the proposed project would cause an increase in student population over the next 20 years. The projected increase in students across the EIR Study Area

<sup>29</sup> Sequoia Union High School District, *Approval and Certification of 2022-23 Second Interim Fiscal Report*, <https://www.seq.org/documents/Accounting/22-23-Second-interim-narrative-22-23.pdf>, accessed on October 16, 2024.

<sup>30</sup> Sequoia Union High School District, September 2023, Facilities Master Plan, [https://drive.google.com/file/d/14TDfrmql5JL\\_hyY5rvijXM0bR7\\_9yC6A/view](https://drive.google.com/file/d/14TDfrmql5JL_hyY5rvijXM0bR7_9yC6A/view), accessed on October 16, 2024..

<sup>31</sup> Sequoia Union High School District, September 2023, Facilities Master Plan, [https://drive.google.com/file/d/14TDfrmql5JL\\_hyY5rvijXM0bR7\\_9yC6A/view](https://drive.google.com/file/d/14TDfrmql5JL_hyY5rvijXM0bR7_9yC6A/view), accessed on October 16, 2024..

<sup>32</sup> Sequoia Union High School District, correspondence with PlaceWorks, October 2024.

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would likely be gradual for the duration of the proposed project as more housing units are incrementally added to the EIR Study Area. The public school districts that serve the EIR Study Area would continue to collect the development impact fees, which each district has adopted, throughout the horizon of the proposed project. Therefore, future development would incrementally contribute toward facility upgrades and expansions, which, pursuant to California Government Code Section 65995, has been deemed sufficient to provide full and complete school facilities mitigation for the impacts from the proposed project, regardless of whether the fees are adequate to fully fund the expansion or construction of needed facilities. While SUHSD does have capital improvements projects outlined and underway, these projects were already identified prior to the proposed project. However, increased student enrollment associated with the buildout projections for the proposed project could exacerbate and increase the need for facility expansions.

The Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to public services, including school services. In addition to the General Plan goals, policies, and actions identified in impact discussion PS-1 related to the provision of public facilities and services, the following General Plan goals, policies, and actions would serve to minimize potential adverse impacts related to performance objectives for school services:

- **Goal ESPS-13:** Ensure adequate public services and high quality design of public facilities to make San Carlos a safe, enjoyable and quality community in which to live, work and shop.
  - **Policy ESPS-13.4:** Work with all special districts, including the school districts, to ensure that development within the city is coordinated with provision of services.
  - **Policy ESPS-13.5:** Maintain neighborhood schools wherever possible. Evaluate City potential to acquire any surplus school sites. If redeveloped, sites shall be used for purposes which are compatible with the surrounding neighborhood and consistent with the General Plan Land Use Map and shall strive to retain school recreation facilities for neighborhood use.
- **Goal ESPS-14:** Provide educational opportunities for all ages.
  - **Policy ESPS-14.1:** Support schools and educational institutions as a key component of San Carlos' identity.
  - **Policy ESPS-14.4:** Evaluate through the California Environmental Quality Act (CEQA) process how new development impacts schools, as the quality of San Carlos schools is a primary asset of the city.
  - **Policy ESPS-14.5:** Participate in the long-range planning activities with San Carlos Unified School District and Sequoia Union High School District.
  - **Action ESPS-14.2:** Advocate for reestablishing a high school within San Carlos for San Carlos residents.
  - **Action ESPS-14.3:** Maintain and enhance City Council collaboration with the San Carlos School District and other appropriate educational entities.

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While future development would increase demand on school services, the increased demand would occur incrementally. Future construction of new or renovated school facilities to accommodate growth under the proposed project would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed to reduce potential environmental impacts. The estimated timing or location of future additional facility improvements are not known at this time, so project-specific environmental impacts that could occur from their construction and operation cannot be determined at this time. It would be speculative to assess the physical effects of those future construction projects and the project's potential contribution to those effects. Pursuant to Section 15145 of the State CEQA Guidelines, if a particular impact is too speculative for evaluation, no further evaluation is required.

Potential secondary effects associated with increased school enrollment, such as vehicle traffic and associated air quality and noise concerns, are addressed in Chapter 4.2, *Air Quality*; Chapter 4.11, *Noise*; and Chapter 4.15, *Transportation*, of this Draft EIR.

With the required payment of development impact fees for new development pursuant to California Government Code Section 65995, General Plan goals, policies, and actions, and future environmental review at the project level for any school facility improvements, impacts to the public-school districts that serve the EIR Study Area would be *less than significant*.

**Significance with Mitigation:** Less than significant.

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PS-6	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative school impacts in the area.
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This cumulative analysis takes into account growth from development within the service area of the school districts within the EIR Study Area. As described under impact discussion PS-5, the proposed project would contribute to increased population that is served by local school districts.

As described in impact discussion PS-5, through the payment of school impact fees, General Plan goal, policies, and action, and standard environmental review procedures for future school improvement projects, the proposed project would not result in significant impact to schools. Payment of school fees and project-level review of school projects to identify potential environmental impacts and mitigation measures as needed would similarly reduce potential impacts from cumulative development. Therefore, cumulative impacts related to school facilities would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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### 4.14.4 LIBRARIES

#### 4.14.4.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

###### *State Regulations*

AB 1600, the Mitigation Fee Act, requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied. This act became enforceable on January 1, 1989.

###### *Local Regulations*

###### San Carlos General Plan

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.14.4.3, *Impact Discussion*.

###### Strategic Plan 2018-2023

The *Strategic Plan 2018-2023* for San Mateo Public Libraries will serve as a communication tool and provide guidance on operational decisions.<sup>33</sup> The plan allows public libraries in San Carlos to anticipate and respond to changes while keeping their core values intact. Key topics in this plan include lifelong learning, technology, outreach and marketing, user experience, and supporting and developing staff.

##### Existing Conditions

San Mateo County Libraries is a Joint Powers Authority (JPA), an independent entity with its own Governing Board, consisting of elected officials from each member. An Operations Committee composed of city and county leaders from each member also provides guidance. The service area is comprised of the cities of Atherton, Belmont, Brisbane, East Palo Alto, Foster City, Half Moon Bay, Millbrae, Pacifica, Portola Valley, San Carlos, Woodside, and the unincorporated areas of the county.

Library services are primarily funded by County property taxes, including Measure K, passed in 2016, which supports essential County services and critical facilities. The Governing Board approves an annual budget and service plan for the library system that includes operations, projects, and initiatives. San

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<sup>33</sup> San Mateo Public Library, 2018, *Strategic Plan 2018-2023*, <https://www.cityofsanmateo.org/DocumentCenter/View/65607/San-Mateo-Public-Library-Strategic-Plan-2018-2023>, accessed August 16, 2022.

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Mateo County Libraries distributes resources designed to meet performance and service objectives. Input is sought from stakeholders to respond to community needs and optimize resources. Per the Library JPA, the minimum service levels are calculated for libraries based on population—the base library service shall be 60 hours per week for members with over 6,500 in population.

The San Carlos branch of the San Mateo County library system is located at 610 Elm Street, adjacent to City Hall. This library offers a large collection of books and other materials for all ages, computers and Internet access, services such as storytimes, making, afterschool programs, language conversation clubs, and technology classes. The San Carlos Library currently operates with 11 permanent positions and 9.75 full-time equivalent positions. The San Carlos Library is open 61 hours, 7 days per week. Across San Mateo County Libraries in 2023-24, 1.7 million visitors visited, 2.4 million items were circulated, and 7,500 programs and events were hosted.<sup>34</sup>

The San Carlos Library is 25 years old and in need of several significant improvements.<sup>35</sup> Currently, the San Carlos Library is expanding onto the second floor of the current facility, adding 1,000 square feet for a makerspace that is estimated to be completed in 2025.<sup>36</sup>

### 4.14.4.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant library services impact if it would:

- PS-7 Result in substantial adverse physical impacts associated with the provision of new or physically altered libraries facilities, need for new or physically altered libraries facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for libraries.
- PS-8 In combination with past, present, and reasonably foreseeable projects, result in cumulative libraries impacts in the area.

### 4.14.4.3 IMPACT DISCUSSION

PS-7	The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered libraries facilities, need for new or physically altered libraries facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for libraries.
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A significant impact would result if, in order for the library system to adequately serve the city, increased demand in the EIR Study Area would require the construction of new facilities or the expansion of

<sup>34</sup> San Mateo County Libraries, correspondence with PlaceWorks October 2024.

<sup>35</sup> San Mateo County Libraries, correspondence with PlaceWorks October 2024.

<sup>36</sup> San Mateo County Libraries, correspondence with PlaceWorks October 2024.

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existing library facilities, the construction or operation of which would cause significant environmental impacts. New residential and non-residential development would increase the resident and daytime population of San Carlos, increasing utilization of library services. This increased demand for library services could impact library facilities if construction activities for new and expanded facilities would result in adverse environmental impacts.

As discussed in Section 4.14.4.1, *Environmental Setting*, the San Carlos Library is in need of several significant improvements, which inhibits the library's ability to meet the community's library needs. Currently the San Carlos Library is expanding onto the second floor of the current facility. Based on the projected population increase in San Carlos by 2045, the San Carlos Library could need to expand to accommodate potential new users.

The Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals and policies that require local planning and development decisions to consider impacts to public services, including library services. In addition to the General Plan goals, policies, and actions identified in impact discussion PS-1 related to the provision of public facilities and services, the following General Plan goals and policies would serve to minimize potential adverse impacts related to performance objectives for library services:

- **Goal ESPS-13:** Ensure adequate public services and high quality design of public facilities to make San Carlos a safe, enjoyable and quality community in which to live, work and shop.
  - **Policy ESPS-13.6:** Maintain existing library facilities as an important activity center within the community.
- **Goal ESPS-14:** Provide educational opportunities for all ages.
  - **Policy ESPS-14.3:** Ensure that all residents have access to library services including access to computers and other technology.

It is expected that new growth under the proposed project would most likely occur incrementally over the next 20 years. The potential need for future library facility expansions would be assessed as development occurs. Future construction of new or renovated library facilities to accommodate growth under the proposed project would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed to reduce potential environmental impacts. The estimated timing or location of future facility improvements are not known at this time, so project-specific environmental impacts that could occur from their construction and operation cannot be determined at this time. It would be speculative to assess the physical effects of those future construction projects and the project's potential contribution to those effects. Pursuant to Section 15145 of the State CEQA Guidelines, if a particular impact is too speculative for evaluation, no further evaluation is required. Additionally, adherence to the General Plan goals, policies, and actions would ensure that there is a *less-than-significant* impact relating to the provision of new or physically altered library facilities.

**Significance without Mitigation:** Less than significant.

**PUBLIC SERVICES**

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<b>PS-8</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative libraries impacts in the area.</b>
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The geographic context for the cumulative library impacts would occur from future development within the buildout horizon of the proposed project, combined with impacts of development on lands adjacent to the city. A significant cumulative environmental impact would result if this cumulative growth would exceed the ability of San Mateo County libraries to adequately serve the EIR Study Area, thereby requiring construction of new facilities or modification of existing facilities. As described in impact discussion PS-7, existing facilities are in need of several significant improvements. The San Carlos Library is currently expanding onto the second floor, and the City plans to address other improvements at the library in the coming years.<sup>37</sup> The payment of County property taxes would ensure adequate library services over the course of the General Plan buildout. Additionally, future construction of new or renovated library facilities would be subject to separate project-level environmental review pursuant to CEQA to identified potential environmental impacts and mitigation measures as needed. Therefore, the proposed project would not result in a cumulatively considerable impact to library services and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<sup>37</sup> San Mateo County Libraries, correspondence with PlaceWorks October 2024.

## **PUBLIC SERVICES**

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## 4.15 TRANSPORTATION

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to transportation, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.15.1 ENVIRONMENTAL SETTING

#### 4.15.1.1 REGULATORY FRAMEWORK

Local, regional, State, and Federal policies regulate many aspects of the City's transportation system, including planning and programming; design; operations; and funding. While the City of San Carlos has primary responsibility for the maintenance and operation of local transportation facilities, there is ongoing coordination between San Carlos staff and regional, state, and federal agencies to plan, manage, and enhance the City's transportation assets; these entities include San Mateo County, San Mateo County Transportation Authority (SMCTA), City/County Association of Governments of San Mateo County (C/CAG), Metropolitan Transportation Commission (MTC), California Department of Transportation (Caltrans), regional transit providers and Federal Highway Administration (FHWA).

#### Federal Regulations

##### *Federal Highway Administration*

The FHWA is the agency of the United States Department of Transportation responsible for the federally funded roadway system, including the interstate highway network and portions of the primary State highway network, such as US Highway 101.

##### *Americans with Disabilities Act*

The Americans with Disabilities Act (ADA) of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. To implement this goal, the US Access Board, an independent federal agency created in 1973 to ensure accessibility for people with disabilities, has created accessibility guidelines for public rights-of-way. While these guidelines have not been formally adopted, they are widely followed by jurisdictions and agencies nationwide. These guidelines address various issues, including roadway design practices, slope and terrain issues, and pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, public transit, and other components of public rights-of-way.

## TRANSPORTATION

### State Regulations

#### *California Department of Transportation*

Caltrans is the owner and operator of the state highway system, which includes US Highway 101 and El Camino Real within San Carlos. In its 2020 *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (TISG), Caltrans developed an approach for evaluating the transportation impacts of land use projects and plans on state highway facilities; this document does not address the impacts of transportation projects. In accordance with current the California Environmental Quality Act (CEQA) requirements, the TISG does not consider vehicle delay in its evaluation of transportation impacts, instead focusing on vehicle miles traveled (VMT). The purposes of the TISG include providing guidance to lead agencies regarding when they should analyze potential impacts to the state highway system; to aid Caltrans staff in reviewing projects; and to ensure consistency in the assessment of impacts and identification of non-capacity increasing mitigation measures.

#### *California Senate Bill 743*

On September 27, 2013, Senate Bill (SB) 743 was signed into law, supporting previous climate-focused and transportation legislation, including the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), as well as the Complete Streets Act (AB 1358), which requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users.

In December 2018, the Governor's Office of Land Use and Climate Innovation (LCI, formerly the Governor's Office of Planning and Research) issued a final advisory to guide lead agencies in implementing SB 743, Technical Advisory on Evaluating Transportation Impacts in CEQA. Key guidance includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact under CEQA.
- VMT for residential and office projects should generally be assessed using efficiency metrics, i.e. on a "per rate" basis.
- The LCI-recommended threshold of significance for residential projects is VMT per capita of fifteen percent below the city or regional average. Applying this threshold, a residential project expected to generate VMT per capita that is more than 85 percent of the regional VMT per capita could result in a significant impact. This threshold was developed to support statewide greenhouse gas emission reduction targets.
- Lead agencies have the discretion to set or apply their own significance thresholds in lieu of those recommended in the advisory, provided they are based on substantial evidence.
- Cities and counties still have the ability to use metrics such as level of service (LOS) for other plans, studies, or network monitoring. However, LOS and similar metrics cannot constitute the sole basis for determining CEQA impacts.

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### *California Complete Streets Act of 2008*

Originally passed in 2008, California’s Complete Streets Act (AB 1358) came into force in 2011 and requires local jurisdictions to plan for land use transportation policies that reflect a “complete streets” approach to mobility. “Complete streets” comprises a suite of policies and street design guidelines which provide for the needs of all road users, including pedestrians, bicyclists, transit operators and riders, children, the elderly, and the disabled. From 2011 onward, any local jurisdiction, county or city, that undertakes a substantive update of the circulation element of its general plan must consider “complete streets” and incorporate corresponding policies and programs.

## Regional Regulations

### *Plan Bay Area 2050*

*Plan Bay Area 2050* is the nine-county San Francisco Bay Area’s long-range plan that addresses regional transportation, housing, economic development, and environmental resilience. The plan identifies funding priorities for a \$1.4 trillion vision over a 30-year period, directed toward addressing the plan’s 35 strategies. *Plan Bay Area 2050* was adopted by the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) in 2021.

*Plan Bay Area 2050* includes the following transportation strategies:

- T1. Restore, operate and maintain the existing system. Commit to operate and maintain the Bay Area’s roads and transit infrastructure while reversing pandemic-related cuts to total transit service hours.
- T2. Support community-led transportation enhancements in Equity Priority Communities. Provide direct funding to historically marginalized communities for locally identified transportation needs.
- T3. Enable a seamless mobility experience. Eliminate barriers to multi-operator transit trips by transfer hubs.
- T4. Reform regional transit fare policy. Streamline fare payment and replace existing operator-specific discounted fare programs with an integrated fare structure across all transit operators.
- T5. Implement per-mile tolling on congested freeways with transit alternatives. Apply a per-mile charge on auto travel on select congested freeway corridors where transit alternatives exist, with discounts for carpoolers, low-income residents, and off-peak travel; and reinvest excess revenues into transit alternatives in the corridor.
- T6. Improve interchanges and address highway bottlenecks. Rebuild interchanges and widen key highway bottlenecks to achieve short- to medium-term congestion relief.
- T7. Advance other regional programs and local priorities. Fund regional programs like motorist aid and 511 while supporting local transportation investments on arterials and local streets.
- T8. Build a Complete Streets network. Enhance streets to promote walking, biking and other micro-mobility through sidewalk improvements, car-free slow streets, and 10,000 miles of bike lanes or multi-use paths.

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- T9. Advance regional Vision Zero policy through street design and reduced speeds. Reduce speed limits to between 20 and 35 miles per hour on local streets and 55 miles per hour on freeways, relying on design elements on local streets and automated speed enforcement on freeways.
- T10. Enhance local transit frequency, capacity and reliability. Improve the quality and availability of local bus and light rail service, with new bus rapid transit lines, South Bay light rail extensions, and frequency increases focused in lower-income communities.
- T11. Expand and modernize the regional rail network. Better connect communities while increasing frequencies by advancing the Link21 new transbay rail crossing, BART to Silicon Valley Phase 2, Valley Link, Caltrain Downtown Rail Extension and Caltrain/High-Speed Rail grade separations, among other projects.
- T12. Build an integrated regional express lanes and express bus network. Complete the buildout of the regional express lanes network to provide uncongested freeway lanes for new and improved express bus services, carpools and toll-paying solo drivers.

### *Metropolitan Transportation Commission*

MTC is the transportation planning, coordinating, and financing agency for the nine-county Bay Area, including San Mateo County. It also functions jointly as the federally mandated metropolitan planning organization (MPO) for the region along with ABAG. It is responsible for regularly updating the Regional Transportation Plan (RTP), a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities.

### *Bay Area Air Quality Management District*

The Bay Area Air Quality Management District (BAAQMD) is the public agency tasked with regulating air pollution in the nine-county Bay Area, including San Mateo County. As a primary source of air pollution in the Bay Area region is from motor vehicles, air district regulations affect transportation planning. The BAAQMD's goals include reducing health disparities due to air pollution, achieving, and maintaining air quality standards, and implementing exemplary regulatory programs and compliance with federal, State, and regional regulations.

### C/CAG Congestion Management Program

C/CAG is the designated Congestion Management Agency (CMA) for San Mateo County. In accordance with California Government Code Section 65088, each CMA is required to prepare and adopt a Congestion Management Program (CMP) on a biennial basis. The CMP includes monitoring and evaluation of LOS along the designated CMP network, which includes US Highway 101 and the El Camino Real (State Route 82)/Holly Street intersection in San Carlos. With the updating of CEQA per the requirements of SB 743, maintenance of LOS standards is no longer part of the environmental review process.

According to the state legislation, the purpose of CMPs is to develop a procedure to alleviate or control anticipated increases in roadway congestion and to ensure that "federal, state, and local agencies join with transit districts, business, private and environmental interests to develop and implement

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comprehensive strategies needed to develop appropriate responses to transportation needs.” The first CMP for San Mateo County was adopted by C/CAG in 1991. It has been updated and amended on a biennial basis. The last CMP update was in 2023.

### C/CAG Transportation Demand Management Policy

The C/CAG Transportation Demand Management (TDM) Policy provides guidelines regarding analysis of the transportation impacts of development projects in municipalities in San Mateo County. Unless exempted from the policy, local jurisdictions are required to notify C/CAG of incoming development that is estimated to generate an average of 100 trips per day. For affected projects, applicants are required to complete a TDM checklist and implement measures to reduce the estimated number of trips and their adverse effects on traffic operations. The type and magnitude of TDM measures are based on the land use type and project size.

## Local Regulations

### *San Carlos 2030 General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.15.3, *Impact Discussion*.

### *City of San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to transportation as follows:

- Chapter 8.50, *Traffic Impact Fee*, establishes transportation impact fees to require new development to fund a proportional share of infrastructure improvements to offset potential transportation impacts, which would affect the quality of service, safety, and other factors. For residential development, the fees are assessed on a per unit basis.
- Chapter 10.48, *Load Limits*, designates truck routes for vehicles exceeding a maximum gross weight, including load, of three tons. Segments of Howard Avenue and Brittan Avenue between El Camino Real and Industrial Road are designated as truck routes, along with US Highway 101, El Camino Real, and Industrial Road.
- Chapter 18.25, *Transportation Demand Management*, adopts a TDM program with requirements that apply to all new residential developments, except for single-family dwellings, accessory units, and multi-family projects of fewer than ten units. Each qualifying project is required to incorporate TDM measures to reduce the estimated project-generated trips to 20 percent lower than the most recent trip generation rates from the Institute for Transportation Engineers (ITE) *Trip Generation Manual*. To demonstrate compliance with the TDM program, applicants must meet monitoring requirements. For projects not in compliance with program requirements, the City may require

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project owners/operators to modify their previously approved TDM measures. The City is currently updating its TDM requirements as part of the Citywide Transportation Demand Management and Parking Reform Project.

### *San Carlos Complete Streets Policy*

The City adopted a Complete Streets Policy in 2012 to support the development of a multimodal transportation network that serves all categories of users. Provisions of the policy include applying a context-sensitive approach to local conditions so that appropriate facilities will be designed to best serve the needs of residential as well as commercial areas, with consideration for the urban, suburban, or rural nature of the location.

### *San Carlos Vehicle Miles Traveled Policy*

In accordance with SB 743, the City adopted VMT thresholds on Nov 12, 2024 (Resolution No. 2024-118) that were based on assessment of local needs and development characteristics, to be used in evaluating the potential VMT impacts of land development and transportation projects. Within the VMT policy certain projects are considered to have less-than-significant transportation impacts and no further transportation analysis is required. These projects include nonresidential projects under 10,000 square feet, residential projects with 10 or fewer single-family units or 15 or fewer multi-family units; projects located within Low VMT Areas or within Transit Priority Areas (TPA); 100-percent-restricted affordable residential projects in infill locations; neighborhood-serving retail or public facility projects that are less than 30,000 square feet; and transportation projects that do not add vehicle capacity. Projects not screened out through the criteria above are required to complete a VMT analysis to determine if there would be a significant VMT impact. An impact would be considered significant if the following thresholds are exceeded:

- Total project-generated VMT per service population exceeds a level of 15 percent below the regionwide baseline VMT rate.
- Project-generated VMT per resident exceeds a level of 15 percent below the regionwide baseline VMT rate.
- Project-generated VMT per employee exceeds a level of 15 percent below the regionwide baseline VMT rate.
- The project increases total (boundary) countywide VMT compared to cumulative “no project” conditions.
- The project is inconsistent with the Regional Transportation Plan/Sustainable Community Strategy Plan (Plan Bay Area).

### *San Carlos Bicycle and Pedestrian Master Plan*

The *Bicycle and Pedestrian Master Plan* (BPMP) was adopted in June 2020. The BPMP establishes a long-term vision for improving walking and bicycling in San Carlos and presents a strategy to develop a comprehensive bicycling and walking network that provides access to transit, schools and downtown. This plan provides guidance to City staff and the development community in building a balanced

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transportation system where active modes are supported and accessible. The goal of the plan is to promote walking and bicycling through the creation of safe, comfortable, and connected networks, and to encourage alternatives to single-occupancy motor vehicle trips.

*East Side Innovation District Vision Plan*

Approved in 2021, the East Side Innovation District Vision Plan sets forth clear goals and principles written to achieve the desired character for the East Side Innovation District. The East Side Innovation District is the area east of El Camino Real and west of US Highway 101 and is bounded by Brittan Avenue to the south and Holly Street to the north. Principles of the Vision Plan related to transportation include principles to adopt street hierarchy guidelines for all public rights of way and new nonvehicular connections within the district, undertake a citywide traffic impacts study, and develop and define districtwide TDM requirements.

**4.14.4.2 EXISTING CONDITIONS****Existing Circulation Network**

The San Carlos General Plan designates four classifications for the City's roadway network. These classifications are hierarchical, based on the volume and type of traffic associated with each street, as follows:

- **Freeways and State Highways:** largely serve through traffic and link the City to the regional transportation network.
- **Arterial Streets:** the primary streets within the City, connecting major destinations to one another.
- **Collector Streets:** provide connectivity between arterial streets and act as feeders for traffic from less densely developed areas.
- **Local Streets:** low-volume, low-speed streets that primarily provide direct access to the abutting properties and typically offer limited connectivity to discourage through trips. They may connect to one or more collector streets.

*Freeways and State Highways*US Highway 101

US Highway 101 is a north-south highway that runs between southern California and the state of Washington. Locally it is configured as an eight-lane, grade-separated freeway and is a major corridor serving communities on the San Francisco Peninsula. In San Carlos, a full interchange along US Highway 101 exists at Holly Street, and a partial interchange with southbound US Highway 101 is provided at Brittan Avenue. There is also a full interchange at Ralston Avenue in Belmont, while Harbor Boulevard and Whipple Avenue provide access to and from southbound US Highway 101 in Belmont and Redwood City, respectively.

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### Interstate 280

A major north-south route along the Peninsula, Interstate 280 (I-280) is a freeway connecting San Jose with San Francisco. In the EIR Study Area, it is located just west of the San Carlos city limits. Ralston Avenue in Belmont provides access to I-280 via State Route (SR) 92, as the SR 92/I-280 interchange is located approximately 0.5 miles west of the SR 92/Ralston Avenue interchange. Along the segment near San Carlos, I-280 includes eight travel lanes.

### El Camino Real

El Camino Real, also designated as SR 82, is a regional route that extends between I-880 in San Jose and I-280 in San Francisco. El Camino Real functions as a state highway and commercial corridor through communities along the San Francisco Peninsula. Within San Carlos, the roadway has two through lanes in each direction and a posted speed limit of 35 miles per hour (mph). The San Carlos Caltrain station is located on El Camino Real. Additionally, as part of the Downtown Specific Plan, El Camino Real would be redesigned based on community feedback and guiding principles for the Downtown Specific Plan.

### *Arterials*

### Alameda de las Pulgas

Alameda de las Pulgas runs north-south through the central part of San Carlos, connecting with Redwood City to the south and Belmont to the north via San Carlos Avenue. Within the City limits there is one travel lane in each direction, the speed limit is 30 mph, and land uses are primarily residential.

### Brittan Avenue

Brittan Avenue runs east-west through San Carlos and is considered a primary entry point to the City. East of El Camino Real, land uses are primarily commercial and there are two travel lanes in each direction with a speed limit of 30 mph. West of El Camino Real there is one travel lane in each direction and land uses are primarily residential. Additionally, as part of the Downtown Specific Plan, a portion of Brittan Avenue could be redesigned based on community feedback and guiding principles for the Downtown Specific Plan.

### Crestview Drive

Crestview Drive runs along the major north-south ridge in the western portion of San Carlos. The route extends from the Belmont city limit to Edgewood Road at a lower elevation. The speed limit is 30 mph, and there are one to two travel lanes in each direction. Land uses are primarily residential along this roadway and it provides access to several parks and open space areas within and outside the City limits.

### Holly Street

Holly Street runs east-west through the downtown area and provides access to US 101 and the Redwood Shores community to the east. East of El Camino Real there are two travel lanes in each direction with a speed limit of 25 mph. West of El Camino Real there is one travel lane in each direction. Land uses are a



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mix of commercial and residential along this roadway. Additionally, as part of the Downtown Specific Plan, a portion of Holly Street could be redesigned based on community feedback and guiding principles for the Downtown Specific Plan.

### Howard Avenue

Howard Avenue between Laurel Street and Industrial Road functions as an arterial with two lanes in each direction and a speed limit of 30 mph. Land uses are primarily commercial in this area.

### Industrial Road

Industrial Road runs north-south through the eastern portion of City. There are two travel lanes in each direction with a speed limit of 35 mph. Offices and commercial and industrial land uses exist along this roadway.

### Laurel Street

Laurel Street is a north-south arterial street serving downtown San Carlos with one travel lane in each direction and a speed limit of 25 mph. The 700 block of Laurel Street was permanently closed in 2023 to be converted into a public plaza. Additionally, as part of the Downtown Specific Plan, portions of Laurel Street would be redesigned based on community feedback and guiding principles of the Downtown Specific Plan.

### Old County Road

Old County Road runs north-south along the east side of the Caltrain tracks and parallel to El Camino Real. With one travel lane in each direction and speed limit of 30 mph, the roadway primarily serves industrial and commercial uses.

### San Carlos Avenue

San Carlos Avenue traverses east to northwest and connects to El Camino Real and Alameda de las Pulgas. East of Prospect Street there are two travel lanes in each direction and land uses are a mix of commercial, residential, and institutional. West of Prospect Street there is one travel lane in each direction, and land uses are residential. The speed limit is 30 mph along most of the roadway. San Carlos Avenue provides pedestrian access to the Caltrain station. Additionally, as part of the Downtown Specific Plan, a portion of San Carlos Avenue would be redesigned based on community feedback and guiding principles for the Downtown Specific Plan.

### Shoreway Road

Shoreway Road runs north-south adjacent to US 101 and mostly serves large commercial and office land uses with one travel lane in each direction and a speed limit of 35 mph.

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### Existing Pedestrian and Bicycle Facilities

#### *Pedestrian Facilities*

The EIR Study Area has pedestrian facilities that include sidewalks, pathways, curb ramps, crosswalks, curb extensions, and amenities such as pedestrian scale lighting, benches, transit shelters, and street trees. While the sidewalk network is generally complete in the eastern and southern areas of the EIR Study Area, in the hilly residential areas there are numerous locations where sidewalks are substandard, not present, or have gaps.

#### *Bicycle Facilities*

Bicycle facilities in the EIR Study Area include Class I pathways, Class II bike lanes, and Class III bike routes. There are continuous bike lanes along Alameda de las Pulgas and Industrial Road, as well as some segments of San Carlos Avenue, Old County Road, and Brittan Avenue. Bicycle routes are also designated along segments of San Carlos Avenue, Old County Road, Brittan Avenue, Cedar Street, and Arroyo Avenue.

### Existing Transit Service

This section provides an overview of existing transit services in the EIR Study Area. The primary public transit providers in the EIR Study Area are the San Mateo County Transit District (SamTrans) and Caltrain. In addition to the services they directly provide, they offer connections to regional transit services and local services in other nearby jurisdictions, described below.

#### *San Mateo County Transit District*

SamTrans provides fixed route bus service in San Carlos and throughout San Mateo County. SamTrans buses are equipped with bike racks that can carry two bicycles. Bike rack space is on a first come, first served basis and riders must be able to load and unload their bicycles without any help from the operator. Two additional bicycles are allowed on SamTrans buses at the discretion of the driver and depending on passenger loads. The following routes serve the City of San Carlos:

- Route ECR provides service along El Camino Real from the Palo Alto Transit Center to the Daly City Bay Area Rapid Transport (BART) Station. On weekdays, the bus runs every 15 minutes from approximately 4:00 a.m. until 2:00 a.m. On weekends, it runs every 20 minutes from 4:45 a.m. until 2:00 a.m.
- Route 61 is a school-oriented route that operates a single bus between the Cities of Belmont and San Carlos with key stops at Carlmont High School, Arundel Elementary School, Heather Elementary School, Arroyo School, various parks, Downtown San Carlos and the San Carlos Caltrain Station. This route begins operation from the San Carlos Caltrain Station at 7:24 a.m. and follows a counterclockwise route around San Carlos and ending at Ralston Avenue in Belmont. In the afternoon, this round begins at the Belmont Library at 4:00 p.m. and ends at the San Carlos Caltrain Station serving multiple schools in San Carlos. On Wednesdays, the route starts at 9:00 a.m. and 1:00 p.m., respectively to support minimum day school schedules.

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- Route 260 is a weekday route that connects the San Carlos Caltrain Station, Redwood Shores, and Carlton Village. It operates daily with a bus every 60 minutes from 8:00 a.m. until 9:00 p.m.
- Route 295 is a weekday route that runs between the the Redwood City Transit Center and the Hillsdale Mall, also serving the Caltrain station in San Carlos. On weekdays, service is provided with a bus every 60 minutes from 6:30 a.m. until 8:00 p.m. and on weekend days from 7:00 a.m. to 8:00 p.m. with 60-minute headways.
- Route 397 runs between Downtown San Francisco and the Palo Alto Transit Center. It operates daily from approximately 1:00 a.m. until 6:45 a.m. with 45-minute headways, with no mid-day or evening service. This route has stops at the San Francisco International Airport, the Millbrae Transit Center, the San Carlos Caltrain station and the Redwood City Transit Center.

### *Caltrain*

Caltrain is the commuter rail line serving the San Francisco Peninsula, connecting San Carlos with San Francisco to the north and San Jose and Gilroy to the south. On weekdays, there are 31 trains servicing the San Carlos Station in the northbound and southbound directions. On weekends, there are 16 trains that stop at the station in each direction. The San Carlos Caltrain Station is located on El Camino Real near the intersection with San Carlos Avenue. The station includes paid vehicle parking as well as racks and lockers for bicycle parking; lockers must be reserved.

### *Bay Area Rapid Transit*

BART provides regional heavy-rail rapid transit service, with stations in Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara Counties. Typical hours of operation for BART are between the hours of 5:00 a.m. and midnight weekdays, 6:00 a.m. to midnight on Saturdays and 8:00 a.m. to midnight on Sundays. Although BART does not provide service to San Carlos, connections to and from San Carlos are available to the Millbrae and San Francisco International Airport stations via Caltrain and SamTrans bus service.

### *San Francisco Bay Area Water Emergency Transportation Authority*

The San Francisco Bay Area Water Emergency Transportation Authority operates the regional ferry service in San Francisco Bay. The only ferry terminal on the Peninsula is in the City of South San Francisco, from where weekday ferry service is available to the Cities of Alameda and Oakland. The South San Francisco ferry terminal includes parking and is not directly served by transit.

### *Paratransit*

Paratransit is an on-demand curb-to-curb service for persons with disabilities who cannot independently use regular fixed-route transit services. The SamTrans' Redi-Wheels service provides paratransit in San Carlos and other San Mateo County communities. Redi-Wheels operates daily service between the hours of 5:30 a.m. and midnight. Riders must have their eligibility certified by SamTrans and reservations can be made in advance.

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### *Private Commuter Shuttles*

Numerous employers provide commuter shuttle service for their employees, with such services implemented by individual employers or through partnerships between multiple businesses. Such services typically provide transportation between employment sites and pick-up points in residential areas or at major transit stations; one such example in San Carlos is the shuttle provided by Electronic Arts to connect the Caltrain station to its Redwood City campus.

### *On-Demand Transportation Services*

On-demand private taxi services are available in San Carlos 24 hours a day. Taxis can be used for trips within San Carlos or for trips between San Carlos and locations in other jurisdictions. Transportation network companies (TNCs) offer similar services in San Carlos and throughout the Bay Area. TNCs provide prearranged transportation services for compensation using an online-enabled application or platform (such as smart phone apps) to connect drivers using their personal vehicles with passengers.

## Travel Characteristics

Residents of San Carlos rely primarily on personal motor vehicles for commuting. As reported in the 2022 American Community Survey (which reflects commuting in the wake of the onset of the COVID-19 pandemic), approximately 62 percent of working San Carlos residents commuted by car, truck, or van, with 59 percent driving alone. Public transportation was used as the primary commute mode by approximately 4 percent of workers living in San Carlos, including 2 percent traveling by commuter rail. Approximately 3 percent of workers reported walking or biking to work, while 29 percent worked from home.

This commute pattern is similar to San Mateo County as a whole, although a higher percentage of San Carlos residents report as working from home. Countywide, 68 percent of County residents commute by car, truck, or van; 7 percent by public transportation; 4 percent by walking and biking; and 20 percent work from home.

In terms of commute distance, 69 percent of employed San Carlos residents travel less than 25 miles to work, with 31 percent having commutes of less than 10 miles and 38 percent traveling 10 to 24 miles.

### 4.15.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant transportation impact if it would:

- TRAN-1 Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- TRAN-2 Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b).
- TRAN-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- TRAN-4 Result in inadequate emergency access.

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TRAN-5 In combination with past, present, and reasonably foreseeable projects, result in cumulative transportation impacts in the area.

### 4.15.3 IMPACT DISCUSSION

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TRAN-1	<b>The proposed project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.</b>
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The proposed project would result in increased development of residential, retail, and commercial land uses and therefore increased use of the transportation system. Based on the proximity of the project sites to mixed-use areas and high-quality transit, the proposed project would support the development of land development patterns that would allow for shorter trips and non-vehicle modes of transportation, so it is expected that the project would generate additional walking, bicycling, and transit trips.

While magnitude of projected development is known, information is not available regarding the precise location of future development projects, the design of project access points, and the adequacy of on-site pedestrian circulation; therefore, the site-specific impacts of future development projects on pedestrian, bicycle, and transit facilities cannot be evaluated as part of this program-level analysis. To ensure that future development projects do not conflict with existing or planned facilities supporting those travel modes, the adequacy of existing facilities would be assessed as part of the development review process, and future pedestrian, bicycle, and transit facilities would be designed using the appropriate design standards and guidelines.

The Land Use (LU) Element and Circulation and Scenic Highways (CSH) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to transportation, including the circulation system. The following General Plan goals, policies, and actions emphasize coordination between land use and transportation and encourage the development of complete streets and multimodal infrastructure:

- **Goal LU-1:** Ensure a sustainable land use pattern.
  - **Policy LU-1.3:** Ensure that development within the TOD corridor maintains and improves the mobility of people and vehicles along and across the corridor.
  - **Policy LU-1.4:** Establish and support the El Camino Real/Caltrain multimodal TOD corridor for the purpose of the mobility of people and vehicles along and across the corridor.
  - **Policy LU-1.5:** Support land use patterns in the TOD corridor that will attract and serve riders of public transit.
  - **Action LU-1.1:** Continue to evaluate the Transportation Demand Management Ordinance to encourage mode shift to reduce vehicular trip generation from new development.

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- **Action LU-1.2:** Include in the Transportation Demand Management Ordinance a requirement that new office development over a certain size include showers and safe and secure bike racks to encourage employees to bicycle to work.
- **Goal LU-3:** Promote connectivity and provide retail and services within walking distance of homes and employment areas.
  - **Policy LU-3.10:** Encourage the creation of safe, walkable environments that include elements such as wide, smooth sidewalks, good lighting, safe crosswalks, clear signage, curb bulbouts, curb cuts, street furniture and trees and traffic-calming measures which allow people of all ages and abilities to exercise and safely access public transportation, community centers and schools and goods and services.
  - **Policy LU-3.13:** Provide for safe and convenient pedestrian and bicycle connections between residential and commercial areas throughout San Carlos.
  - **Action LU-3.2:** Consider development of a Complete Streets policy, setting performance standards and prioritizing implementation steps.
  - **Action LU-3.3:** Work with SamTrans and other public agencies to provide a public mass transit stop accessible to every home and business in San Carlos.
- **Goal CSH-1:** To develop a circulation system that is safe, environmentally-friendly and responsive to the needs of various land uses planned within the City of San Carlos.
  - **Policy CSH-1.1:** Widths of streets and highways should be sufficient to address existing and projected traffic volumes, emergency access requirements, while providing positive pedestrian and bicycle experiences.
- **Goal CSH-2:** To provide a safe, efficient and aesthetically pleasing circulation network for various transportation modes in addition to the automobile.
  - **Policy CSH-2.2:** Provide for adequate pedestrian and bicycle facilities as viable transportation modes in San Carlos, as recommended in the San Carlos Bicycle and Pedestrian Master Plan.
  - **Policy CSH-2.3:** Access to public transportation facilities should be convenient and designed to encourage use of public transit.
  - **Action CSH-2.2:** Continue to support operation of adequate public bus service throughout San Carlos.
  - **Action CSH-2.3:** Support the Peninsula Corridor Joint Powers Board efforts to upgrade and expand the Peninsula rail service. Work with that agency in implementing its plans for local facility improvements.
- **Goal CSH-3:** Maintain a street and highway system which accommodates future growth while maintaining acceptable levels of service.
  - **Policy CSH-3.1:** Strive to reduce baseline and development-related traffic by implementing and enforcing the Transportation Demand Management Ordinance.

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- **Policy CSH-3.2:** Support city-wide efforts to reduce vehicular trips within and through the community.
- **Policy CSH-3.3:** Support the incorporation of Transportation Demand Management measures in new development to reduce traffic impacts.
- **Policy CSH-3.4:** Support Smart Growth and Sustainability principles to reduce travel time from house to jobs, provide affordable transportation to all members of the community, allow compact mixed-use development and decrease dependency on automobiles.
- **Policy CSH-3.7:** Public sidewalks and walkways shall be designed to accommodate access in accordance with the Americans with Disabilities Act, and including any other applicable State and federal laws, regulations and guidelines, and shall be kept clear of obstruction.
- **Policy CSH-3.10:** The City shall support efforts for a coordinated transportation system and maintaining acceptable levels of traffic with local, regional and Caltrans agencies.
- **Policy CSH-3.12:** The City should preserve its existing alley and pedestrian path systems to the maximum extent feasible.
- **Policy CSH-3.14:** The City shall support the continued operation and upgrading of the railroad commuter service between Gilroy and San Francisco.
- **Policy CSH-3.15:** The City supports dedication and preservation of rights-of-way for future transit service along the rail corridor.
- **Policy CSH-3.16:** The City shall support adequate access to affordable transportation alternatives for people with impaired mobility.
- **Action CSH-3.1:** New development projects shall be required to mitigate traffic, circulation and/or parking impacts. The City may impose a mitigation fee on new developments for the proportional share of costs to mitigate the traffic, circulation and/or parking impact of a project.
- **Action CSH-3.2:** The City shall consider adoption of a Transportation Impact Fee for new development to support city-wide Transportation Demand Management measures.
- **Action CSH-3.3:** The City shall support local school district efforts to reduce traffic through programs such as safe routes to school, school pools and school bus/shuttle programs.
- **Action CSH-3.5:** The City shall coordinate with adjacent communities and responsible agencies to provide an interconnected system of pedestrian ways, trails, bikeways and transit routes.
- **Action CSH-3.8:** The City shall support San Mateo City/County Association of Governments (C/CAG) policies on Congestion Management.
- **Action CSH-3.9:** The City shall support an intra-city (east/west) local shuttle to feed into other forms of local and regional transportation.
- **Goal CSH-4:** Provide for safe walking and bicycle riding for transportation and recreation.
  - **Action CSH-4.1:** Provisions shall be made for bicycle transportation within the city as designated on the San Carlos plan for bicycle routes.

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- **Goal CSH-5:** Ensure all modes of transportation connect safely and efficiently both within San Carlos and with neighboring jurisdictions.
  - **Policy CSH-5.1:** Connect neighborhoods, school sites, activity centers, transportation centers, recreational sites and other important community amenities with sidewalks, pedestrian paths, trails and bikeways.
  - **Policy CSH-5.3:** Support an interconnected system of pedestrian ways, paths, trails, bikeways and transit routes within the city and between adjacent communities.
- **Goal CSH-6:** Integrate transportation and land use.
  - **Policy CSH-6.1:** Bicycling and walking facilities should be incorporated into all new development projects to the maximum extent feasible.
  - **Policy CSH-6.2:** Support transit oriented development with mixed, dense land use that reduces the need to travel and that is linked to good transit. The City shall work with local, regional, and State representatives to encourage the support and funding of transit-oriented development projects.
  - **Action CSH-6.1:** Support improved east-west connectivity by providing pedestrian/bicycle under crossings of the Caltrain tracks at intervals, during future track reconstruction, or as developer mitigation.

These goals, policies, and actions provide for the construction of sidewalks and bicycle facilities to improve access of pedestrians and bicyclists to transit services, commercial areas, and other destinations. Due to the built-out nature of the EIR Study Area and recent development trends, it is anticipated that much of projected development would be concentrated within 0.5 miles of the Caltrain Station and/or 0.25 miles of El Camino Real; based on the proximity of future development projects to transit and mixed-use areas, they would be expected to generate transit, pedestrian, and bicycle trips. As a result, the land use pattern associated with the proposed project would be expected to further encourage the use of transit and active transportation modes. Therefore, with respect to conflicts with circulation system policies, the impact of the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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TRAN-2	The proposed project would conflict or be inconsistent with CEQA Guidelines Section 15064.3 (b).
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SB 743 established the potential increase in VMT associated with a project as the basis for determining transportation impacts of development projects. Guidance on VMT assessment has been provided by both LCI in the 2018 publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory* and the City of San Carlos Transportation Significance Criteria adopted by Resolution No. 2024-118 on November 12, 2024 that establish VMT thresholds.

The analysis of the proposed project's potential transportation impacts was based on an assessment of applicable policies and a quantitative evaluation of VMT. Project VMT was assessed using the San Carlos



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version of the City/County Association of Governments of San Mateo County-Santa Clara County Valley Transportation Authority Countywide Model. This version includes updates to a 2024 existing year and other planned projects within San Carlos. VMT for the proposed project includes all trip purposes, such as home-based trips, work commute trips, recreational trips, and school-related trips.

Model inputs include households, population, and employment for six different categories. The project's land use characteristics were entered into the model in the appropriate location at the TAZ level, model runs were completed and relevant VMT results were extracted. VMT metrics were assessed for the proposed project compared to the baseline regional average.

VMT thresholds are defined using the most recent SB 743 VMT Guidelines and thresholds identified in City of San Carlos Transportation Significance Criteria (adopted by Resolution No. 2024-118 on November 12, 2024). These were developed based on recommendations from LCI, dated December 2018. While cities and counties are allowed to develop their own methods, the City of San Carlos has developed an impact criterion that is mostly consistent with LCI recommendations.

Guidance provided by LCI recommends the use of screening thresholds to quickly identify when a project can be expected to result in a less-than-significant impact without conducting a detailed study. The CEQA screening criteria proposed for land use projects in San Carlos are listed below:

- Small Projects
- Low VMT Areas (per City and VMT maps)
- Transit Priority Areas (TPA) – usually within 0.5 mile around an existing major transit corridor with frequencies of 15 minutes or less.
- Affordable Housing – 100 percent restricted affordable residential project in an infill location
- Neighborhood-serving retail or public facilities.

While some development projects may screen out based on proximity to transit or other criteria, the proposed project is assessed at a programmatic level and includes all projected development. For future development projects, a more detailed project level VMT analysis may be required to screen out or evaluate VMT based on individual project attributes such as land use, size, or proximity to transit.

The City of San Carlos has opted to compare VMT results to a regional baseline average threshold. Based on these guidelines, any development that does not screen out for a VMT assessment should generate a VMT per service, per capita, and per employee VMT of 15 percent less than the regional average in order to not incur impacts under CEQA and SB 743.

### **VMT per Service Population**

At the aggregate level, Table 4.15-1, *VMT Per Service Population*, indicates that the proposed project's overall VMT results generate higher total VMT with the project compared to the 2024 existing baseline. This is to be expected considering the buildout projections by 2045. Table 4.15-1 also indicates that the proposed project would result in a VMT/service population of 26.51, which exceeds the significance threshold of 23.20 (15 percent below the existing baseline regionwide average) and represents a decrease of approximately 3 percent below the existing regional baseline.

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**TABLE 4.15-1 VMT PER SERVICE POPULATION**

Scenario	Households	Population	Employee	Service VMT	VMT/Service	15% Below
<b>2024 Existing Conditions</b>						
EIR Study Area	13,253	43,164	20,787	1,714,960	26.82	
County	272,149	792,983	385,023	34,364,121	29.17	
Region	2,767,453	7,750,809	3,850,038	316,943,24	27.32	23.20
<b>2045 Cumulative plus Project</b>						
EIR Study Area	21,554	64,781	47,326	2,972,085	26.51	
County	332,206	963,942	514,487	43,445,984	29.39	
Region	3,432,942	9,697,103	4,753,639	393,579,002	27.24	

Note: 15 percent below San Mateo County average VMT = 23.20 per Service Population. Household and employee data do not exactly match Table 3-1, *Proposed 2045 General Plan Reset Buildout Projections in the EIR Study Area*, due to rounding. Population numbers do not match Table 3-1 due to differences in population assumptions by traffic analysis zone in the C/CAG traffic model.

Source: City/County Association of Governments of San Mateo County Model, Kittelson and Associates, Inc., 2024.

### VMT Per Capita

Table 4.15-2, *VMT per Capita*, indicates that the 2045 General Plan Reset would result in a home-based work VMT per capita of 15.84, which exceeds the significance threshold of 13.71 (15 percent below existing regional baseline) and represents a decrease of approximately 2 percent below the existing regional baseline.

**TABLE 4.15-2 VMT PER CAPITA**

Scenario	Households	Population	Residential VMT	VMT/capita	15% Below
<b>2024 Existing Conditions</b>					
EIR Study Area	13,253	43,164	735,863	17.05	
County	272,149	792,983	12,743,901	16.07	
Region	2,767,453	7,750,809	124,999,697	16.13	13.71
<b>2045 Cumulative plus Project</b>					
EIR Study Area	21,554	64,781	1,026,010	15.84	
County	332,206	963,942	14,492,305	15.03	
Region	3,432,942	9,697,103	156,876,303	16.18	

Note: 15 percent below San Mateo County average VMT: 13.71 per capita. Household data do not exactly match Table 3-1, *Proposed 2045 General Plan Reset Buildout Projections in the EIR Study Area*, due to rounding. Population numbers do not match Table 3-1 due to differences in population assumptions by traffic analysis zone in the C/CAG traffic model.

Source: City/County Association of Governments of San Mateo County Model, Kittelson and Associates, Inc., 2024.

### VMT Per Employee

Table 4.15-3, *VMT Per Employee*, indicates that the proposed 2045 General Plan Reset would result in a home-based work VMT per employee of 18.55, which exceeds the significance threshold of 14.80 (15 percent below the existing regional baseline), and represents an increase of approximately 7 percent above the existing regional baseline.

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**TABLE 4.15-3 VMT PER EMPLOYEE**

Scenario	Households	Employees	Employee VMT	VMT/Employee	15% Below
<b>2024 Existing Conditions</b>					
City	13,253	20,787	387,047	18.62	
County	272,149	385,023	7,376,675	19.16	
Region	2,767,453	3,850,038	66,840,112	17.36	14.80
<b>2045 Cumulative plus Project</b>					
City	21,554	47,326	877,892	18.55	
County	332,206	514,487	10,356,566	20.13	
Region	3,432,942	4,753,639	84,048,418	17.68	

Notes: 15 percent below San Mateo County average VMT: 14.8 per employee. Household and employee data do not exactly match Table 3-1, *Proposed 2045 General Plan Reset Buildout Projections in the EIR Study Area*, due to rounding.

Source: City/County Association of Governments of San Mateo County Model, Kittelson and Associates, Inc., 2024.

## Cumulative Conditions

The City's VMT Guidelines also recommend computing VMT using the "boundary method" for cumulative conditions. The boundary method estimates the sum of all VMT within a specific geographic area. As stated in the City's VMT Guidelines, Cumulative Conditions provide a long-range view of future travel patterns based on the region's land use and transportation system projections. Because VMT may fluctuate with population and employment growth, or changes in travel modes, the City Guidelines recommend that any impact analysis should consider the cumulative effects of the proposed project, including other changes, and all other projects. An evaluation of the project's effect on VMT is a comparison of the total boundary VMT within San Mateo County between Cumulative without Project Conditions and Cumulative plus Project Conditions. Table 4.15-4, *County VMT per Employee*, indicates that the proposed project increases countywide boundary VMT by 159,008, or 0.7 percent, compared to 2045 conditions without the proposed project.

**TABLE 4.15-4 COUNTY VMT PER EMPLOYEE**

Scenario	Boundary VMT	Net Change
2024 Existing Conditions	17,852,477	
2045 without Project (General Plan)	22,070,724	
2045 plus Project (General Plan Reset)	22,229,732	159,008 (0.7%)

Source: City/County Association of Governments of San Mateo County Model, Kittelson and Associates, Inc., 2024.

## Findings

As described above, the proposed project would exceed the following thresholds per the City of San Carlos SB 743 VMT Guidelines:

- Total project-generated VMT per service population would exceed a level of 15 percent below the regionwide baseline VMT rate.
- Home-based, project-generated VMT per resident would exceed a level of 15 percent below the regionwide baseline VMT rate.

## TRANSPORTATION

- Home-based work, project-generated VMT per employee would exceed a level of 15 percent below the regionwide baseline VMT rate.
- Total (boundary) countywide VMT would exceed Cumulative without Project conditions.

This VMT analysis may be considered conservative at the programmatic level, as the VMT modeling analysis also includes VMT associated with existing land uses, which are not easily separated in the modeling from future land use VMT. Invariably, areawide plans may not be able to achieve baseline targets because of the existing land use VMT. As shown in Tables 4.15-1, 4.15-2, and 4.15-3, for all metrics, the 2045 project VMT would decrease VMT when compared to the 2024 existing VMT per service population, capita, and employee, respectively, in the city. This suggests the projected land uses would perform better than existing land uses by shortening average trip lengths and generally reducing overall VMT per service population, resident, and employee. Also note, while the projected land uses are modeled citywide, many future development sites would be strategically concentrated in key development areas within 0.5 miles of high-quality transit and, therefore, per City VMT guidelines, they could potentially screen out for VMT when assessed at the project level.

As discussed in impact discussion TRAN-1, the Circulation and Scenic Highways (CSH) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to transportation, including TDM. The General Plan goals, policies, and actions listed in impact discussion TRAN-1 related to TDM would serve to minimize potential adverse impacts related to VMT.

Nevertheless, the proposed 2045 General Plan Reset, when assessed at the aggregate programmatic level, could incur VMT impacts under CEQA and result in *significant* impacts.

**Impact TRAN-2:** The proposed project could exceed the City's VMT significance criteria by generating VMT per service population, per capita, and per employee that exceeds a threshold of 15 percent less than the regional average and by increasing total countywide VMT.

**Mitigation Measure TRAN-2:** The City of San Carlos shall amend its Transportation Demand Management program (San Carlos Municipal Code Chapter 18.25, *Transportation Demand Management*) to increase the required trip reduction to the extent feasible.

**Significance with Mitigation:** Significant and unavoidable. With the amendment of the City's TDM program to include a more stringent trip reduction requirement, the City would reduce vehicle miles traveled from future development projects to the extent deemed feasible by the City. The City has already begun the process of updating its TDM program, as part of the Citywide Transportation Demand Management and Parking Reform Project. However, the City has not yet determined the precise amount by which the trip reduction requirement will be amended. Until such time that the TDM program is amended, this impact remains significant and unavoidable at the programmatic level, and it is unknown if the amended program would be able to achieve a VMT reduction sufficient to reduce this impact to a less-than-significant level. This finding does not preclude future projects from identifying less-than-significant VMT impacts, or from screening out of the City's detailed VMT analysis requirements.

## TRANSPORTATION

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TRAN-3	The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
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Improvements to the transportation and circulation system in the vicinity of future development sites and the EIR Study Area more broadly would be implemented over time. Any such improvements would be designed and constructed to local, regional, and federal standards, and as such, would not be expected to introduce any hazardous design features. Projects that would include the development of new streets, circulation improvements and access points would be reviewed for compliance with safety guidelines and standards as part of the development review process. Safety considerations include maintenance of a substantially clear line of sight at driveways between the driver of a vehicle waiting to enter the through street and the driver of an approaching vehicle.

The Circulation and Scenic Highways (CSH) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to transportation, including design features. The following General Plan goals and policies would also serve to minimize impacts related to design hazards:

- **Goal CSH-3:** Maintain a street and highway system which accommodates future growth while maintaining acceptable levels of service.
  - **Policy CSH-3.5:** Street and right-of-way widths should be designed and constructed in accordance with the street standards established in this plan, the City Subdivision Ordinance and Standard Details. However, flexibility for street widths should be permitted with sensitivity to slope, neighborhood character, traffic volume, emergency access requirements, and pedestrian/bicycle needs.
- **Goal CSH-4:** Provide for safe walking and bicycle riding for transportation and recreation.
  - **Policy CSH-4.2:** Reduce potential conflicts, safety hazards and physical obstacles between bicyclists, automobiles and pedestrians and ensure compliance with the Americans with Disabilities Act, and including any other applicable State and federal laws, regulations and guidelines.
  - **Policy CSH-4.3:** The safety of bicyclists, pedestrians, as well as motorists shall be considered in street design wherever possible.

Through compliance with safety guidelines and standards and adherence to the General Plan goals and policies, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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TRAN-4	The proposed project would not result in inadequate emergency access.
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The completion of projects included in the proposed 2045 General Plan Reset would not be expected to result in inadequate emergency access. Future development under the proposed project would be

## TRANSPORTATION

required to comply with City and County standards and requirements and would undergo review by public safety officials as part of the approval process. Safety, Fire, and Building Codes would also be required to be adhered to.

Emergency vehicle response times would continue to be reduced due to the ability of emergency vehicles to use vehicle preemption technology (where possible) and sirens; this capability would remain regardless of any roadway capacity modification. Additionally, all roadway users must yield the right-of-way to emergency vehicles when using their sirens and lights, the added project-generated traffic would not decrease access for emergency vehicles. Roadway segments that would experience a reduction in vehicular roadway capacity, if any, would undergo individual operations analyses to assess the potential impacts to emergency vehicle access, and mitigation measures would be developed as needed to reduce potentially significant impacts to less than significant levels.

Furthermore, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to transportation, including emergency access. The following General Plan goal, policies, and actions would serve to minimize impacts related to emergency access:

- **Goal ESPS-3:** A resilient San Carlos is well prepared to minimize risks associated with wildfire.
  - **Action ESPS-3.8:** When a fire has occurred in the VHFHSZ [Very High Fire Hazard Severity Zone], evaluate if street design and size can be reconfigured to improve emergency access and evacuation efficiency.
  - **Action ESPS-3.14:** Condition all new development and redevelopment to have adequate fire protection, incorporate and maintain fire safe design, including fuel modification zones, defensible space, two ingress/egress points, emergency vehicle access, and visible home addressing and street signage.
  - **Action ESPS-3.23:** Evaluate the City's roadways regarding access, alignments, etc. to facilitate fire, police, and ambulance access and resident egress in case of an emergency.
  - **Policy ESPS-3.14:** Provide adequate evacuation routes and access for fire and emergency service vehicles to all San Carlos areas.
  - **Policy ESPS-3.15:** Identify and implement measures to mitigate the single access roads and nonconforming roadways, as feasible.
  - **Action ESPS-3.26:** Prohibit parking on one or both sides of a street identified as having the potential to interfere with emergency vehicle access and/or resident evacuation during a fire, when Red Flag alerts have been issued.

Compliance with City and County standards and Safety, Fire, and Building Codes, and adherence to the General Plan goal, policies, and actions, emergency access impacts of the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## TRANSPORTATION

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TRAN-5	The proposed project would, in combination with past, present, and reasonably foreseeable projects, result in cumulative transportation impacts in the area.
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The impact evaluation described in impact discussions TRANS-1 through TRANS-4 includes discussion on cumulative transportation impacts in the City of San Carlos due to the proposed 2045 General Plan Reset. In addition to the proposed General Plan goals, actions, and policies previously listed, the following General Plan goal and policy would help mitigate cumulative transportation impacts:

- **Goal CSH-3:** Maintain a street and highway system which accommodates future growth while maintaining acceptable levels of service.
  - **Policy CSH-3.9:** Where appropriate and relevant, based on the location and scope of a development project under consideration, the City shall consider regional, as well as local traffic impacts when assessing new development projects.

Implementation of the proposed 2045 General Plan Reset would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses, nor would it result in inadequate emergency access.

However, implementation of the proposed project would generate VMT per service, per capita, and per employee that exceeds a threshold of 15 percent less than the regional average, as well as increase total countywide VMT. Therefore, the cumulative contribution to regional VMT resulting from implementation of the proposed project is *significant and unavoidable*. The impact is *significant and unavoidable* and is identified and discussed in impact discussion TRAN-2.

## TRANSPORTATION

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## TRIBAL CULTURAL RESOURCES

### 4.16 TRIBAL CULTURAL RESOURCES

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to tribal cultural resources (TCR) and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.16.1 ENVIRONMENTAL SETTING

##### 4.16.1.1 REGULATORY FRAMEWORK

###### Federal Regulations

###### *Archaeological Resources Protection Act*

The Archaeological Resources Protection Act (United States Code, Title 16, Sections 470aa–mm) became law on October 31, 1979, and has been amended four times. It regulates the protection of archaeological resources and sites that are on federal and Indian lands.

###### *Native American Graves Protection and Repatriation Act*

Native American Graves Protection and Repatriation Act, Title 25, United States Code (1990), defines “cultural items,” “sacred objects,” and “objects of cultural patrimony;” establishes an ownership hierarchy; provides for review; allows excavation of human remains, stipulates return of the remains according to ownership; sets penalties for violations; calls for inventories; and provides for return of specified cultural items.

###### State Regulations

###### *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. Cultural resources are recognized as a nonrenewable resource and therefore receive protection under the California Public Resources Code (PRC) and the California Environmental Quality Act (CEQA).

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.

## TRIBAL CULTURAL RESOURCES

### *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.<sup>1</sup>*

### *California Senate Bill 18*

California Government Code Section 65352.3-5, formerly known as Senate Bill (SB) 18, states that prior to the adoption or amendment of a city or county's general plan, or specific plans, the city or county shall consult with California Native American tribes that are on the contact list maintained by the NAHC. The intent of this legislation is to preserve or mitigate impacts on places, features, and objects, as defined in PRC 5097.9 and PRC 5097.993, that are within the city or county's jurisdiction. The bill also states that the city or county shall protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features, and objects identified by Native American consultation. Government Code 65362.3-5 applies to all general and specific plans and amendments proposed after March 1, 2005.

### *Assembly Bill 52*

Assembly Bill (AB) 52, the Native American Historic Resource Protection Act, sets forth a proactive approach intended to reduce the potential for delay and conflicts between Native American and development interests. Projects subject to AB 52 are those that file a notice of preparation for an EIR or notice of intent to adopt a negative or mitigated negative declaration on or after July 1, 2016. AB 52 adds TCRs to the specific cultural resources protected under CEQA. Under AB 52, a TCR is defined as a site, feature, place, cultural landscape (must be geographically defined in terms of size and scope), sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register or included in a local register of historical resources. A Native American Tribe or the lead agency, supported by substantial evidence, may choose at its discretion to

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<sup>1</sup> California Health and Safety Code, Division 7, *Dead Bodies*, Part 1, *General Provisions*, Chapter 2, *General Provisions*, Section 7050.5(b), [https://leginfo.ca.gov/faces/codes\\_displayText.xhtml?lawCode=HSC&division=7.&title=&part=1.&chapter=2.&article=7050.5\(b\)](https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=7.&title=&part=1.&chapter=2.&article=7050.5(b)), accessed August 18, 2022.

## TRIBAL CULTURAL RESOURCES

treat a resource as a TCR. AB 52 also mandates lead agencies to consult with tribes, if requested by the tribe, and sets the principles for conducting and concluding consultation.

### *Government Code Section 65092*

When there is a public hearing, a notice will be sent 10 days in advance to any Native American tribes who are on the contact list and filed a written request for notice. The contact list is maintained by the Native American Heritage Commission.

## Local Regulations

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.16.3, *Impact Discussion*.

### 4.16.1.2 EXISTING CONDITIONS

The first known inhabitants of San Carlos were the Ohlone Indians.<sup>2</sup> Ohlone is the name that has been given to the many related groups of Native Americans living along the coast between Monterey and San Francisco.

A sacred lands file search conducted by the NAHC for the project area identified sacred lands in the EIR Study Area. The NAHC identified thirteen local Native American representatives from the following seven tribes as potentially having local knowledge:

- Amah Mutsun Tribal Band
- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Costanoan Rumsen Carmel Tribe
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the SF Bay Area
- The Ohlone Indian Tribe
- Wuksache Indian Tribe/Eshom Valley Band

The City notified all thirteen tribal representatives about the proposed project on July 3, 2024, and asked for information about potential resources at or near the EIR Study Area.

The Costanoan Rumsen Carmel Tribe responded requesting consultation and had a meeting on September 25th, 2024 with the City of San Carlos. During the consultation, the Costanoan Rumsen Carmel Tribe recommended that indigenous people be on-site during development processes, that cultural sensitivity trainings be conducted, and that a discovery clause be added when remains are discovered.

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<sup>2</sup> City of San Carlos, 2024 (accessed), About San Carlos, [https://www.cityofsancarlos.org/community/about\\_san\\_carlos.php#collapse630b1](https://www.cityofsancarlos.org/community/about_san_carlos.php#collapse630b1), accessed on September 30, 2024.

## TRIBAL CULTURAL RESOURCES

The Ohlone Indian Tribe was notified of the project and the City invited the tribe to participate in consultation, but no consultation occurred. However, the Ohlone Indian Tribe requested that a tribal member be on the project from beginning to end.

On behalf of the Indian Canyon Band of Costanoan Ohlone People, Kanyon Consulting responded and the City invited the tribe to participate in consultation but no consultation occurred. However, Kanyon Consulting requested that a Native American Monitor and an Archaeologist be present on-site at all times during any/all ground disturbing activities.

### 4.16.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant TCR impact if it would:

- TCR-1 Would the project cause a substantial adverse change in the significance of a TCR, 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.
- TCR-2 In combination with past, present, and reasonably foreseeable projects, result in cumulative TCR impacts in the area.

### 4.16.3 IMPACT DISCUSSION

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TCR-1	<b>The proposed project would not cause a substantial adverse change in the significance of a TCR.</b>
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As previously described in Section 4.16.1.1, *Regulatory Framework*, a TCR is defined under AB 52 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register or included in a local register of historical resources, or if the City of San Carlos, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR.

In response to the Notice of Preparation for this Draft EIR, the NAHC recommended that an archeological records search be conducted for the EIR Study Area. Because the estimated timing and location of future development is not known at this time, it is unknown if archeological resources would be affected. Impacts from future development in the EIR Study Area could impact unknown archaeological resources, including Native American artifacts and human remains. As discussed above under Section 4.16.1.2,

## TRIBAL CULTURAL RESOURCES

*Existing Conditions*, the sacred lands file search conducted by the NAHC for the project area did identify sacred lands within the EIR Area. The Costanoan Rumsen Carmel Tribe was the only tribe to participate in consultation with the City. The tribe recommended that indigenous people be on-site during the development processes, cultural sensitivity trainings be conducted, and that a discovery clause be added when remains are discovered.

The Land Use (LU) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to TCRs. The following General Plan goal, policies, and actions would serve to minimize potential adverse impacts on TCRs:

- **Goal LU-12:** Protect San Carlos' historic and cultural resources to maintain and enhance a unique sense of place.
  - **Policy LU-12.1:** Evaluate historical, cultural, and tribal cultural resources early in the development review process through consultation with interested parties.
  - **Policy LU-12.2:** Foster the preservation, restoration and compatible reuse of architecturally and/or historically significant structures and sites.
  - **Policy LU-12.5:** Treat with respect and dignity any human remains discovered during implementation of public and private projects within the city and fully comply with the California Native American Graves Protection and Repatriation Act and other appropriate laws.
  - **Action LU-12.1:** Ensure thorough compliance with the provisions of the California Environmental Quality Act (CEQA) relating to potential impacts to cultural, historical, and tribal cultural resources.
  - **Action LU-12.6:** The City of San Carlos shall develop mapping to indicate areas in the City with archaeological sensitivity and guidance documentation for public and private construction projects that involve ground disturbance activities in areas with archaeological sensitivity. The requirements may include 1) an archeological records search, 2) construction training for cultural sensitivity, and 3) procedures if archaeological resources are discovered.

Compliance with existing federal, State, and local regulations and the General Plan goal, policies, and actions listed above would protect unrecorded TCRs in the EIR Study Area by providing for the early detection of potential conflicts between development and resource protection, and by preventing or minimizing the material impairment of the ability of archaeological deposits to convey their significance through excavation or preservation. Impacts would therefore be *less than significant*.

**Significance without Mitigation:** Less than significant.

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TCR-2	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative TCR impacts in the area.
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Cumulative impacts to TCRs occur when a series of actions leads to adverse effects on local Native American tribes or tribal lands. While TCRs have been identified in the EIR Study Area, future AB 52

## TRIBAL CULTURAL RESOURCES

consultations with Native American tribes to identify TCRs would be required for projects that have the potential to cause significant impacts to TCRs.

As discussed in Chapter 4.4, *Cultural Resources*, of this Draft EIR, the proposed project would comply with federal and State laws protecting cultural resources. Compliance with existing federal, State, and local regulations and the General Plan goals, policies, and actions would ensure that TCRs, if discovered on future development project sites, are protected and handled appropriately. Therefore, cumulative impacts to TCRs would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## UTILITIES AND SERVICE SYSTEMS

### 4.17 UTILITIES AND SERVICE SYSTEMS

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to aesthetics, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project. Stormwater, as it relates to both water quality and watersheds, is addressed in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR.

#### 4.17.1 WATER

The EIR Study Area is served by three water providers: California Water Service Mid-Peninsula District (Cal Water-MPS), Mid-Peninsula Water District (MPWD), and the City of Redwood City. Cal Water-MPS provides water service for most of the EIR Study Area, while MPWD provides water to a small northern portion of the City between El Camino Real and Highway 101. There is another small southern portion within the EIR Study Area northwest of the intersection of Edgewood Road and Alameda de las Pulgas that is provided with potable water by the City of Redwood City. However, this small area is developed with residential properties and there is no anticipated future growth in this area within the buildout of the proposed project. Therefore, the analysis provided below focuses on Cal Water-MPS and MPWD.

##### 4.17.1.1 ENVIRONMENTAL SETTING

#### Regulatory Framework

##### *Federal Regulations*

##### Federal Safe Drinking Water Act

The Safe Drinking Water Act, the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times since it came into law. The Act authorizes the United States Environmental Protection Agency (USEPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and human-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Water Resources Control Board (SWRCB) Division of Drinking Water regulates public drinking water systems. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

##### America's Water Infrastructure Act of 2018

America's Water Infrastructure Act was signed into law on October 23, 2018, and authorizes federal funding for water infrastructure projects; expands water storage capabilities; assists local communities in complying with the Safe Drinking Water Act and Clean Water Act (CWA); reduces flooding risks for rural,

## UTILITIES AND SERVICE SYSTEMS

western, and coastal communities; and addresses significant water infrastructure needs in tribal communities.<sup>1</sup> Additionally, the act requires that drinking water systems that serve more than 3,300 people develop or update risk assessments and emergency response plans. Risk assessments and emergency response plans must be certified by the USEPA within the deadline specified by the act.

### *State Regulations*

#### Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Act (Water Code Sections 13000 et seq.) was passed in 1969 and amended in 2013. It is the basic water quality control law for California. Under this act, the SWRCB has authority over State water rights and water quality policy. The act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB), to oversee water quality on a day-to-day basis at the local and regional levels. RWQCBs engage in various water quality functions in their respective regions and regulate all pollutant or nuisance discharges that may affect either surface water or groundwater.

#### Urban Water Management Planning Act (Senate Bills 610 and 221)

The California Urban Water Management Planning Act and Section 10620 of the Water Code require that all urban water suppliers in California that provide water to more than 3,000 customers or supply more than 3,000 acre-feet per year (AFY)<sup>2</sup> to prepare and adopt an Urban Water Management Plan (UWMP) and update it every five years. The act is intended to support efficient use of urban water supplies. It requires the UWMP to compare water supply and demand over the next 20 years for normal years, single dry years, and multiple dry years and to determine current and potential recycled water uses.

Senate Bill (SB) 610 and SB 221 were enacted to 1) ensure better coordination between local water supply and land use decisions and 2) confirm that there is an adequate water supply for new development. The following projects that are subject to the California Environmental Quality Act (CEQA) are required at a minimum to prepare a Water Supply Assessment (WSA):

- Residential developments consisting of more than 500 dwelling units.
- Shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- Commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- Hotel or motel, or both, having more than 500 rooms.
- Industrial, manufacturing, or processing plant or industrial park planned to employ more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

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<sup>1</sup> John Barasso, 2018, Congress Passes America's Water Infrastructure Act, <https://www.barrasso.senate.gov/public/index.cfm/2018/10/congress-passes-america-s-water-infrastructure-act>, accessed October 25, 2024.

<sup>2</sup> One acre-foot is the amount of water required to cover one acre of ground (43,560 square feet) to a depth of one foot.



## UTILITIES AND SERVICE SYSTEMS

- Mixed-use project that includes one or more of the projects specified above.
- Project that would demand an amount of water equivalent to, or greater than, the amount of water required for 500 dwelling units.

SB 221 requires written verification that there is sufficient water supply available for new residential subdivisions that include over 500 dwelling units. The verification must be provided before commencement of construction for the project.

### Sustainable Groundwater Management Act of 2014

On September 16, 2014, a three-bill legislative package was signed into law collectively known as the Sustainable Groundwater Management Act (SGMA). The Governor's signing message states "a central feature of these bills is the recognition that groundwater management in California is best accomplished locally." Under the roadmap laid out by the legislation, local and regional authorities in medium and high priority groundwater basins must form groundwater sustainability agencies (GSAs) that oversee the preparation and implementation of groundwater sustainability plans (GSPs).

### Water Conservation Act of 2009 (Senate Bill X7 7)

New mandatory requirements for increasing water use efficiency, per State law (SB-X7 7), mandate the reduction of per capita water use and agricultural water use throughout the State by 20 percent by 2020. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for State water grants or loans. SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards. Demonstration of compliance with this regulation is a required component of each water provider's 2020 UWMP. Both Cal Water-MPS and MPWD are in compliance with their target reductions.

### 2018 Water Conservation Legislation

In 2018, the California Legislature enacted two policy bills (SB 606 and Assembly Bill [AB] 1668) to establish long-term improvements in water conservation and drought planning to adapt to climate change and longer and more intense droughts in California.<sup>3</sup> The framework applies to both urban and agricultural water use. The Department of Water Resources and the SWRCB were tasked with establishing new water use efficiency standards for:

- Indoor residential water use
- Outdoor residential water use
- Commercial, industrial, and institutional water use for landscape irrigation with dedicated meters
- Water loss

Urban water suppliers are required to stay within annual water budgets based on their standards for their service areas, and to calculate and report their urban water use objectives in an annual water use

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<sup>3</sup> California Department of Water Resources, 2024, 2018 Water Conservation Legislation, <https://water.ca.gov/Programs/Water-Use-And-Efficiency/2018-Water-Conservation-Legislation>, accessed October 25, 2024.

## UTILITIES AND SERVICE SYSTEMS

report. The indoor residential water use standard was established with the passage of SB 1157 in 2022. As a result, the California Water Code defines a 55-gallon-per-person daily standard for indoor residential use until 2025, at which time it decreases to 47 gallons, and further decreases to 42 gallons by 2030.

The outdoor residential and commercial water use standards are established as landscape efficiency factors (LEFs) and become progressively more efficient over time, with an LEF for residential and commercial account of 0.80 until 2035, at which time it decreases to 0.63 until 2040, and then establishes a LEF for residential outdoor accounts of 0.55 and a LEF for commercial outdoor accounts of 0.45 after 2040. The water loss standard is the maximum allowable “real” water loss measured in gallons per connection per day for each water purveyor’s service area. Real losses are defined as the volume of annual leakage from the water purveyor’s distribution system.

Collectively the water use efficiency standards and local service area characteristics (such as population and landscape area) establish the Urban Water Use Objectives (UWUOs) per urban retail water supplier that cannot be exceeded on an annual basis. Urban retail water suppliers are required to calculate and report their UWUOs alongside their actual usage in an annual report. The first reports were due to the SWRCB on January 1, 2024 and are required to be submitted every January 1 thereafter. The final proposed “Making Conservation a California Way of Life” regulation was published by the SWRCB on July 26, 2024 and is expected to become effective in April 2025.

The legislation also includes changes to UWMP preparation requirements. These changes include additional requirements for Water Shortage Contingency Plans (WSCPs), expansion of dry year supply reliability assessments to a five-year drought period, and establishment of annual drought risk assessment procedures and reporting.

### Water Conservation in Landscaping Act of 2006

The Water Conservation in Landscaping Act (AB 1881) requires cities and counties to adopt the State of California’s Model Water Efficient Landscape Ordinance (MWELO) or a comparable landscape water conservation ordinance that is at least as effective as the State’s MWELO in conserving water.<sup>4</sup>

The MWELO was revised in July 2015 via Executive Order B-29-15 to address the ongoing drought and to build resiliency for future droughts. The 2015 revisions to the MWELO increased water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture and by limiting the portion of landscapes that can be covered in turf. Each city and county is required to submit annual reports to DWR that document how the agency is achieving compliance with the State MWELO and how many projects were subject to the ordinance during the annual reporting period. Recently, MWELO went through a round of revisions in 2024 to reduce ambiguity and improve clarity of the requirements as well as reorganize the content to better adhere to the landscape design process. The 2024 revisions did not modify or add new requirements to MWELO.

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<sup>4</sup> California Legislative Information, 2006, Assembly Bill No. 1881, [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=200520060AB1881](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=200520060AB1881), accessed October 25, 2024.

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### California Building Code: CALGreen

The California Building Standards Commission adopted the nation's first green building standards in July 2008, the California Green Building Standards Code, also known as CALGreen. CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure in California. The code establishes planning and design standards for sustainable site development, including water efficiency and water conservation measures that typically reduce water consumption by 20 percent. CALGreen is updated every three years to allow for consideration and possible incorporation of new low flow plumbing fixtures and water efficient appliances. The mandatory provisions of CALGreen became effective January 1, 2011, and the latest version, the 2022 California Green Building Standards Code, became effective on January 1, 2023.<sup>5</sup> The building efficiency standards are enforced through the local building permit process.

### California Plumbing Code

The latest version of the California Plumbing Code was issued in 2022 and became effective as of January 1, 2023. It is updated on a three-year cycle. It specifies technical standards for the design, materials, workmanship, and maintenance of plumbing systems. One of the purposes of the plumbing code is to prevent conflicting plumbing codes within local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems.

### California Water Code

The California Water Code states that the water resources of the State must be put to beneficial use and that waste or unreasonable use of water should be prevented. The code is divided into several sections that include provisions regarding water quality, formation of irrigation districts and water districts, safe drinking water, and water supply and infrastructure improvements.

### Mandatory Water Conservation

Following the declaration of a state of emergency on July 15, 2014, due to drought conditions, the SWRCB adopted Resolution No. 2014-0038 for emergency regulation of Statewide water conservation efforts.<sup>6</sup> These regulations, which went into effect on August 1, 2014, were intended to reduce outdoor urban water use and persuade all California households to voluntarily reduce their water consumption by 20 percent. Urban water suppliers with 3,000 or more service connections were required to report monthly water consumption to the SWRCB.

In January of 2022, following the Governor's proclamation of a drought state of emergency for all counties, the SWRCB adopted the prohibited wasteful water uses emergency regulations. These include

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<sup>5</sup> Department of General Services, 2024, CALGreen, <https://www.dgs.ca.gov/BSC/CALGreen#codes>, accessed October 25, 2024.

<sup>6</sup> Water Resources Control Board, 2014, Resolution No. 2014-0038, [https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2014/rs2014\\_0038\\_regs.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2014/rs2014_0038_regs.pdf), accessed October 25, 2024.

## UTILITIES AND SERVICE SYSTEMS

the prohibition of the following wasteful water use practices: 1) the application of potable water to outdoor landscapes in a manner that causes excess runoff; 2) the washing of vehicles without an automatic shut-off nozzle; 3) the application of potable water to driveways and sidewalks; 4) the use of potable water in nonrecirculating ornamental fountains; and 5) the application of potable water to outdoor landscapes during and within 48 hours after at least 0.25 inch of rainfall. In June of 2022 additional emergency water conservation regulations were enacted prohibiting the irrigation of non-functional turf at commercial, industrial, and institutional accounts, and the implementation of conservation actions under Level 2 of urban water suppliers' WSCPs. As of June 5, 2024, the emergency regulations expired.

In October of 2023, AB 1572 was signed into law by the Governor, prohibiting the irrigation of non-functional turf at commercial, industrial, and institutional sites (with exceptions for areas irrigated with recycled water or harvested rainwater). The irrigation prohibitions become effective in stages between 2027 and 2031, beginning with state and local government facilities. Under the law, urban water suppliers must adopt the same irrigation prohibitions into their local regulations.

### *Regional Regulations*

#### Cal Water-Mid-Peninsula District: Urban Water Management Plan

Cal Water-MPS serves the Cities of San Carlos and San Mateo and adjacent unincorporated areas of San Mateo County, including the Highlands and Palomar Park. Cal Water-MPS adopted its current 2020 UWMP in June 2021 in compliance with the Urban Water Management Planning Act, the Water Conservation Act of 2009, and Sections 10610 to 10656 of the California Water Code.<sup>7</sup> All urban water suppliers are required to prepare, adopt, and file a UWMP with DWR every five years.

The Water Conservation Act of 2009, also known as SBX7-7, requires that urban water suppliers reduce per capita water use by 20 percent by 2020. As reported in the UWMP, Cal Water-MPS met this goal in 2020 with a per capita water demand of 95 gallons per capita per day (gpcd) as compared to the target goal of 124 gpcd.<sup>8</sup>

The 2020 UWMP describes water demands, water supply sources, and supply reliability for its service area in five-year increments for normal years, single dry years, and multiple dry years. The UWMP also provides water supply contingency planning in case of shortage emergencies, demand management measures to increase water use efficiency, and current and planned water conservation efforts. The UWMP states that there will be sufficient supplies to meet existing and future demands through 2045 for normal years, but that there could be a shortage of water supplies in single-dry years and multiple-dry years with implementation of the Bay-Delta Plan.

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<sup>7</sup> California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District.

<sup>8</sup> California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District.

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### Cal Water-Mid-Peninsula District: Water Supply Planning Documents

Cal Water-MPS uses a series of integrated planning processes and reports to support water resource and environmental sustainability efforts and updates them on a recurring basis to adjust to changing conditions and risks and ensure that there are sufficient water supplies for their customers. Pertinent plans and studies developed by Cal Water-MPS are summarized below:

- **Climate Change Study.** This study consists of two parts: Phase 1, Water Resources Monitoring and Adaptation Plan, and Phase 2, Climate Change Risk Assessment and Adaptation Framework. These studies analyze climate-related vulnerabilities in Cal Water-MPS service areas, facilities, operations, and water supply portfolios. The results indicate how risks may change over time based on vulnerabilities, such as sea level rise and wildfires, and provide a framework for future mitigation and adaptation planning.
- **Water Supply and Demand Assessment.** This document is an annual report submitted to DWR that requires each urban water supplier to prepare an annual assessment and an annual shortage report that evaluates the near-term water supply reliability and describes actions that are taken to address potential shortages, including implementation of the WSCP.
- **Urban Water Management Plans.** UWMPs are completed every five years and provide critical information for the Cal Water-MPS service area, including historical and projected water demands, water supplies, supply reliability, potential vulnerabilities, water shortage contingency planning, and demand management programs.
- **Water Shortage Contingency Plans.** The WSCP is included as an appendix to the UWMP and is updated every five years. The plan outlines appropriate responses during water supply shortages and interruptions to protect health and safety, minimize economic disruption, and present environmental and community assets.
- **Conservation Master Plans.** These plans are also included as an appendix to the UWMP and updated on a five-year cycle. The plans summarize the mix of conservation measures that Cal Water-MPS plans to implement, including the estimated water savings, costs, and effects on water demand, as well as progress toward reaching its conservation goals.
- **Water Supply Reliability Plans/Studies.** These plans and studies evaluate the reliability of existing regional water supplies and assess supply and demand options to enhance future reliability. The reports also contain water supply project recommendations for facilities planning processes.
- **Water Supply and Facilities Master Plans.** Based on the water supply strategies, these plans forecast potential infrastructure needs and support long-term operational reliability.

### Cal Water -Mid-Peninsula District: Water Shortage Contingency Plan

The Cal Water-MPS 2020 UWMP includes the WSCP which outlines stages of response to water shortages caused by drought or supply interruptions.<sup>9</sup> The primary objective of the WSCP is to ensure

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<sup>9</sup> California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District, Appendix L: Water Shortage Contingency Plan.

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that the District has in place the necessary resources and management responses to protect health, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions.

Water shortage levels range from 1 to 6, with goals to reduce water demand by 10 percent to over 50 percent, respectively. Stage 1 measures include: 1) limiting landscape irrigation to specific times, 2) prohibit the application of potable water to outdoor landscapes within 48 hours of measurable rainfall, 3) restaurants may only serve water upon request, and 4) prohibit the use of potable water for decorative water features that do not recirculate water. Stage 5, designated as an emergency shortage, requires net zero demand increase on new water service connections and prohibits single-pass cooling systems. Stage 6, which is classified as an extreme shortage, enacts a moratorium on new water service connections and prohibits all landscape irrigation.

### Cal Water – Development Offset Program

In 2021, Cal Water began implementation of a Development Offset Program for the three Peninsula Districts which rely on SFPUC supplies, which includes Cal Water-MPS that serves San Carlos. The purpose of the program is to ensure that there is enough water at all times to meet the basic needs of the communities and increase drought resiliency. The program requires any new residential, commercial, or industrial development that is projected to increase demand by more than 50 AFY to pay a special facilities fee, referred to as a developer offset fee, consisting of \$15,400 per AF of net demand increase to offset its net increase in water demand. The net demand increase is defined as the project's projected water demand minus the existing water demand, onsite credits (if available), and/or alternative sources of water supply. Alternative sources may include but are not limited to: 1) reused graywater, 2) reused blackwater, 3) reused mixed gray/blackwater, 4) captured rainwater/stormwater, and 5) air conditioning condensate.

The offset amount is determined using a detailed projection of total annual water demand resulting from the proposed development, excluding temporary demands for landscape establishment. The applicant may choose to comply by 1) paying Cal Water-MPS the required offset amount calculated according to the Policy, and/or 2) conducting other activities as defined in the Policy. Cal Water-MPS will verify compliance with the Policy (i.e., ensure that all payments for offsets and/or conservation offset measures are completed prior to establishing a water connection).

### Mid-Peninsula Water District: Urban Water Management Plan

The MPWD is the water purveyor for the City of Belmont and portions of the City of San Carlos, Redwood City and parts of unincorporated San Mateo County. MPWD adopted its current 2020 UWMP in September 2021 in compliance with the Urban Water Management Planning Act, the Water Conservation Act of 2009, and Sections 10610 to 10656 of the California Water Code.<sup>10</sup> All urban water suppliers are required to prepare, adopt, and file a UWMP with DWR every five years.

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<sup>10</sup> Mid-Peninsula Water District, September 2021, *2020 Urban Water Management Plan*.

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The Water Conservation Act of 2009, also known as SBX7-7, requires that urban water suppliers reduce per capita water use by 20 percent by 2020. As reported in the UWMP, MPWD met this goal in 2020 with a per capita water demand of 97 gallons per capita per day (gpcd) as compared to the target goal of 121 gpcd.<sup>11</sup>

The 2020 UWMP describes water demands, water supply sources, and supply reliability for its service area in five-year increments for normal years, single dry years, and multiple dry years. The UWMP also provides water supply contingency planning in case of shortage emergencies, demand management measures to increase water use efficiency, and current and planned water conservation efforts. The UWMP states that there will be sufficient supplies to meet existing and future demands through 2045 for normal years, but that there could be a shortage of water supplies in single-dry years and multiple-dry years with adoption of the Bay Delta Plan Amendment. MPWD is currently updating its UWMP with a projected completion date of July 2026.

### Mid-Peninsula Water District: Water Shortage Contingency Plan

The MPWD 2020 UWMP includes the WSCP which outlines stages of response to water shortages caused by drought or supply interruptions.<sup>12</sup> The primary objective of the WSCP is to ensure that the District has in place the necessary resources and management responses to protect health, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions.

Water shortage levels range from 1 to 6, with goals to reduce water demand by 10 percent to over 50 percent, respectively. Level 1 measures include: 1) limiting landscape irrigation to specific times, 2) all nonessential water use for public entities should cease, 3) restaurants may only serve water upon request, and 4) new irrigation systems must be equipped with rain sensors that shut off the system when it rains. Stage 5, designated as an emergency shortage, requires net zero demand increase on new water service connections and all landscape irrigation is prohibited. During Stage 6, which is classified as an extreme shortage, MPWD may discontinue service to consumers violating conservation provisions, prohibit decorative turf on all new construction, require removal and replacement of all decorative turf with drought-tolerant planting upon the sale of property.

### Mid-Peninsula Water District: Water Efficient Landscape Ordinance

MPWD adopted a Water Efficient Landscape Ordinance (WELO) Ordinance (No. 115) in 2015.<sup>13</sup> MPWD requires completion of a water efficient landscape application for any new construction with 500 square feet or more of landscape, or rehabilitated landscape of 1,000 square feet or more that requires a

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<sup>11</sup> Mid-Peninsula Water District, September 2021, *2020 Urban Water Management Plan*.

<sup>12</sup> Mid-Peninsula Water District, September 2021, *2020 Water Shortage Contingency Plan*.

<sup>13</sup> Mid-Peninsula Water District, 2024, MPWD Legislation, <https://www.midpeninsulawater.org/legislation>, October 25, 2024.

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building permit, plan check, or design review. In coordination with the City, MPWD reviews landscape plans to verify compliance with the code requirements.<sup>14</sup>

### Bay Delta Plan Amendment

The reliability of water supplies for Cal Water-MPS and MPWD is impacted if and when the Bay Delta Amendment is enacted, because the sole source of their water supplies is from the San Francisco Public Utilities Commission (SFPUC)'s Regional Water System (RWS). In December 2018, the SWRCB adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, known as the Bay-Delta Plan Amendment, to establish water quality objectives to maintain the health of the Bay-Delta ecosystem and increasing salmonid populations. The Bay-Delta Amendments requires the release of 30 to 50 percent of "unimpaired flow" for three San Joaquin River tributaries (the Stanislaus, Merced, and Tuolumne Rivers) from February through June during normal years and drought conditions.

If the Bay-Delta Plan Amendment is implemented, the SFPUC would be able to meet projected water demands for their retail customers in normal years but would experience supply shortages in single dry years and multiple dry years. This impacts the water supplies of both Cal Water-MPS and MPWD, as documented in their 2020 UWMPs for single dry years and multiple dry years. The SFPUC has initiated an Alternative Water Supply Planning Program to meet its retail and wholesale customer needs and limit rationing to a maximum of 20 percent system wide.

Since adoption of the Bay-Delta Plan Amendment, over a dozen lawsuits have been filed, in both State and federal courts, challenging the SWRCB's adoption of the amendment. This litigation is in the early stages and there have been no court rulings as of this date. SFPUC is also in negotiations with the SWRCB to provide an "alternative" for a future amendment to the Bay-Delta Plan. Nevertheless, the Cal Water-MPS and MPWD 2020 UWMPs conservatively assume that the Bay-Delta Plan would be implemented in quantifying future water supplies and reliability.

### San Francisco Public Utilities Commission Water System Improvement Plan

The SFPUC's Water System Improvement Plan is expected to mitigate the impacts of the Bay Delta Plan Amendment by undertaking a number of water supply projects to meet dry year demands with no greater than 20 percent system-wide rationing. These projects include the following:

- **Calaveras Dam Replacement Project.** The SFPUC constructed a new dam of equal height downstream of the existing dam to address seismic vulnerabilities. The project was completed in 2019.
- **Alameda Creek Recapture Project.** As part of the regulatory requirements, the SFPUC must implement bypass and instream flow releases for Alameda Creek. This project will recapture a portion of the water yield lost by these restrictions and return this yield to the RWS through facilities

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<sup>14</sup> Mid-Peninsula Water District, 2024, MPWD Water Efficient Landscape Ordinance (WELO), <https://www.midpeninsulawater.org/article-details.php?id=71>, accessed October 25, 2024.



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in Sunol Valley. Water that infiltrates from Alameda Creek will be recaptures into an existing quarry pond and pumped to the Sunol Valley Water Treatment Plant or to San Antonio Reservoir.

- **Lower Crystal Springs Dam Improvements.** Improvements to Lower Crystal Springs Dam and the joint San Mateo/SFPUC Bridge Replacement Project have been completed so that the reservoir elevation can now be raised. However, the raising of the reservoir elevation is being delayed with the discovery of the endangered species, the Fountain Thistle. New plant populations must be restored before the reservoir elevation is raised.
- **Regional Groundwater Storage and Recovery Project.** SFPUC, Cal Water, Daly City, and San Bruno entered into a strategic partnership to conjunctively operate the south Westside Groundwater Basin. During years of normal or heavy rainfall, the project provides additional surface water to the partner agencies in San Mateo County in lieu of groundwater pumping. Reduced pumping results in water storage through natural recharge of up to 20 billion gallons of new supply that is available during dry years. All phases of work have been completed, including Phase I, which consisted of the construction of 13 wells, and Phase 2 which involved three additional groundwater test wells and completion of the South San Francisco Main well and pipeline.

### San Francisco Public Utilities Commission Alternative Water Supply Program

The SFPUC is also exploring other projects that would increase overall water resilience through implementation of the Alternative Water Supply (AWS) Program. The AWS Program identifies a future water supply gap in dry years, both to meet existing and potential obligations to its customers, and to meet future customer demands. The future water supply gap is characterized as between 92 million gallons per day (MGD) to meet 2045 customer demands to 122 MGD to meet obligations. Based on SFPUC's rationing policy, rationing could fill approximately 12 percent of the water supply gap. The remaining gap would need to be address through the development of new regional alternative water supply projects. Some of the projects include:

- Daly City Recycled Water Expansion would replace some of the groundwater pumping by using recycled water for irrigation customers, enhancing the reliability of the groundwater basin and providing in-lieu groundwater recharge that can be used in dry years.
- PureWater Peninsula would treat wastewater effluent from the City of San Mateo and Silicon Valley Clean Water to drinking water standards at a new advanced water treatment plant, The purified water would be stored in Crystal Springs Reservoir where it would be blended with other RWS supplies
- ACWD-USD Purified Water would treat wastewater effluent from Union Sanitary District to drinking water standards at a new advanced water treatment plant and deliver the purified water to Alameda County Water District's groundwater basin for recharge. The water can be extracted and treated again for use in dry years.
- South Bay Purified Water would treat wastewater effluent from the Regional Wastewater Facility in San Jose to drinking water standards at a new advanced water treatment plant. The new supply would be treated to new DPR regulations for distribution. While the project may produce water in all years for the region, the RWS is only expected to receive water in dry years.

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- Calaveras Reservoir Expansion Project would add additional storage to the reservoir to store excess RWS supplies or other source water during wet/normal years.
- Groundwater Banking in the Modesto Irrigation District and Turlock Irrigation District service areas could be used to provide additional water supply to meet instream releases in dry years thus reducing water supply impacts to the SFPUC service area.

### *Local Regulations*

#### San Carlos General Plan

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.1.3, *Impact Discussion*.

#### City of San Carlos Municipal Code

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to water as follows:

- Chapter 8.60.120, *Model Water Efficient Landscaping Ordinance Requirements*, describes the MWELO requirements for anyone requiring a building or planning permit, plan check, or landscape design review for new construction with a landscape area greater than 500 square feet or rehabilitated existing landscape with a total landscape area greater than 2,500 square feet.
- Chapter 15.04.070, *Title 24, Part 5, California Plumbing Code with appendices*, adopts the latest plumbing code for new construction.
- Chapter 15.04.125, *Title 24, Part 11, California Green Building Standards Code (CALGreen)*, establishes CALGreen's energy and water efficiency mandatory measures for new residential construction.
- Chapter 18.18.080, *Water Efficient Landscaping*, establishes water-efficient landscape and irrigation guidelines to promote the conservation and efficient use of water and minimize runoff with the use of automatic control systems. The SCMC requires the estimated total water use of a proposed landscaping not to exceed the maximum applied water allowance.

## Existing Conditions

Most of the EIR Study Area is within the San Mateo Plain Subbasin of the Santa Clara Valley Groundwater Basin.<sup>15</sup> The southwestern portion of the EIR Study Area in the hills is not within a designated

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<sup>15</sup> San Mateo County, 2019, *San Mateo County GIS open data: San Mateo Plain Subbasin*, <https://data-smcmaps.opendata.arcgis.com/datasets/san-mateo-plain-subbasin?geometry=-122.296%2C37.491%2C-122.242%2C37.503>, accessed October 15, 2024.

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groundwater basin. The San Mateo Plain Subbasin is designated as a very low priority basin and therefore is not regulated under SGMA. This is because there is very little groundwater use in this basin (less than 2,700 acre-feet/year) and most of groundwater withdrawal is in the subbasin areas south of the EIR Study Area (Redwood City and Menlo Park).

There are two primary water purveyors that serve the EIR Study Area: Cal Water-MPS and MPWD. Cal Water-MPS serves most of the EIR Study Area and MPWD serves a small northern portion of the City between El Camino Real and Highway 101, adjacent to the City of Belmont. As discussed above, there is another small southern portion within the EIR Study Area that is provided with potable water by the City of Redwood City. However, this small area is already developed with residential properties and there is no anticipated development in this area. Therefore, the analysis provided below focuses on Cal Water-MPS and MPWD. Figure 4.17-1, *Water Suppliers*, depicts the boundaries of water districts and service areas of the San Carlos water suppliers. Both Cal Water-MPS and MPWD purchase all of their water supplies from SFPUC's Regional Water System, which consists entirely of surface water.

### *Cal Water-MPS*

#### Water Supply Sources

Cal Water is a subsidiary of the California Water Service Group and provides water to communities throughout California, organized into districts throughout the state. Cal Water purchases all its water from the San Francisco Regional Water System (RWS), which is operated by the SFPUC. The RWS supplies are shared between three Cal Water Districts: the MPS, the South San Francisco District, and the Bear Gulch District. Cal Water-MPS serves central San Mateo County and the communities of San Carlos, San Mateo, parts of unincorporated Redwood City, and adjacent unincorporated portions of San Mateo County, including The Highlands and Palomar Park. Approximately 85 percent of the water supply to the RWS originates in the Hetch Hetchy watershed. The remaining 15 percent of the water supply originates locally in the Alameda and Peninsula watersheds and is stored in the San Antonio, Calaveras, Crystal Springs, Pilarcitos, and San Andreas reservoirs.<sup>16</sup>

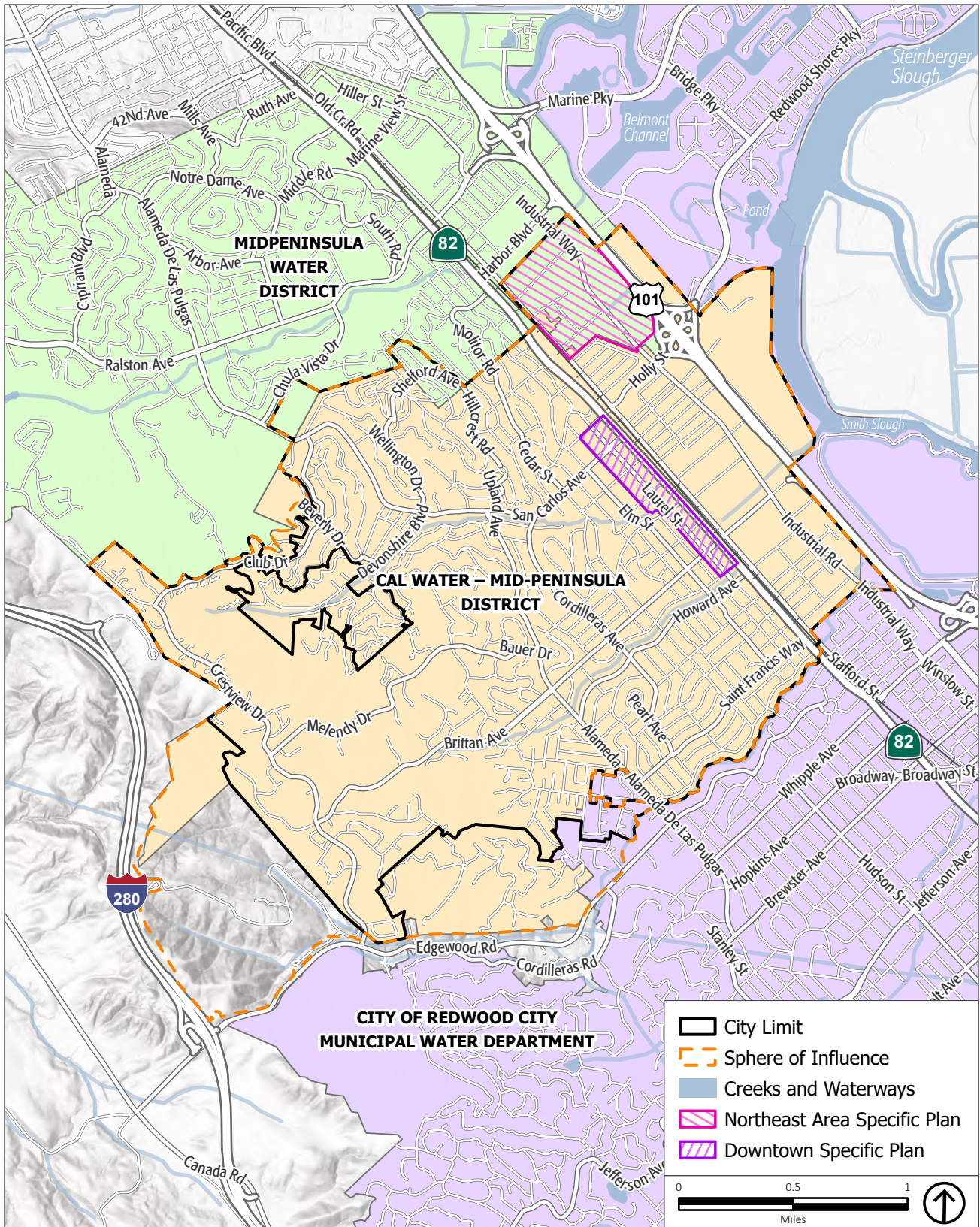
Cal Water-MPS operates two Public Water Systems (PWS): the San Mateo PWS and the San Carlos PWS. These systems include 35 storage tanks, 54 booster pumps, and 383 miles of pipeline that deliver roughly 12 million gallons of water per day to more than 35,000 service connections.<sup>17</sup> All the water supplied by Cal Water-MPS is from surface water treated by SFPUC prior to delivery. There currently is no use of groundwater or recycled water and these sources are not anticipated to be available for future use through 2045.<sup>18</sup>

<sup>16</sup> California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District.

<sup>17</sup> California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District.

<sup>18</sup> California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District.

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Source: San Mateo County, 2017; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.17-1  
Water Suppliers

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Water Supply Assurance

The amount of water available to the SFPUC's wholesale and retail customers is constrained by hydrologic conditions, physical facilities, and institutional parameters that allocate the water supply of the Tuolumne River. Because of these constraints, the SFPUC is dependent on reservoir storage to augment its water supplies. SFPUC has a Supply Assurance Agreement to provide 184 MGD to its wholesale customers. However, the Supply Assurance Agreement is subject to reduction during periods of water shortage due to drought, emergencies, or other scenarios. Each wholesale customer's share of the 184 MGD is referred to as an Individual Supply Guarantee (ISG).

Cal Water's ISG with SFPUC is shared among three Cal Water Districts: Bear Gulch, Mid-Peninsula, and South San Francisco. The ISG amount was originally 35.39 MGD. However, the acquisition of the Los Trancos Water District in 2005 resulted in the transfer of 0.11 MGD of ISG to Cal Water and in 2009 Cal Water acquired the Skyline County Water District, which also transferred its' 0.181 MGD ISG to Cal Water. These acquisitions increased Cal Water's total ISG to 35.68 MGD.<sup>19</sup> Cal Water purchased an average of 29,38 MGD in 2020 and is projected to purchase 30.35 MGD in 2045, which is less than the ISG of 35.68 MGD.<sup>20</sup>

Water Supply and Demand

Because all three Cal Water Districts share one contractual SFPUC allocation of supply and manage their supplies collectively, this analysis for the Cal Water demand and supply includes all three Peninsula Cal Water Districts (i.e., Mid-Peninsula, Bear Gulch, and South San Francisco).<sup>21</sup>

The projected water demand for Cal Water from 2020 through 2045 is shown in Table 4.17-1, *Cal Water Demands: 2020 to 2045 (AFY)*. The increase in water demand over a 25-year period is minimal, because Cal Water accounts for both active and passive water conservation measures in their future projections.

**TABLE 4.17-1 CAL WATER DEMANDS: 2020 TO 2045 (AFY)**

District	2020	2025	2030	2035	2040	2045
South San Francisco	6,936	7,016	6,956	7,108	7,473	7,896
Mid-Peninsula	14,563	14,418	14,530	14,786	14,977	15,279
Bear Gulch	12,972	12,796	12,699	12,730	12,675	12,694
Total	34,471	34,230	34,185	34,624	35,125	35,869

Source: Source: EKI Environmental & Water, 2022, *Water Supply Assessment for the Alexandria District for Science and Technology*, prepared by Cal Water Mid-Peninsula District, Draft January 2022.

<sup>19</sup> EKI Environmental & Water, 2022, *Water Supply Assessment for the Alexandria District for Science and Technology*, prepared by Cal Water Mid-Peninsula District, Draft January 2022.

<sup>20</sup> EKI Environmental & Water, 2022, *Water Supply Assessment for the Alexandria District for Science and Technology*, prepared by Cal Water Mid-Peninsula District, Draft January 2022.

<sup>21</sup> EKI Environmental & Water, 2022, *Water Supply Assessment for the Alexandria District for Science and Technology*, prepared by Cal Water Mid-Peninsula District, Draft January 2022.

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Cal Water also provides the current and projected water supplies for its three districts, as shown in Table 4.17-2, *Cal Water Supplies: 2020 to 2045 (AFY)*.

**TABLE 4.17-2 CAL WATER SUPPLIES: 2020 TO 2045 (AFY)**

District	2020	2025	2030	2035	2040	2045
Purchased (SFPUC)	32,932	32,383	32,338	32,777	33,278	34,022
Bear Gulch Reservoir	0	840	840	840	840	840
Groundwater	1,539	1,534	1,534	1,534	1,534	1,534
Total	34,471	34,757	34,712	35,151	35,652	36,396

Source: EKI Environmental & Water, 2022, Water Supply Assessment for the Alexandria District for Science and Technology, prepared by Cal Water Mid-Peninsula District, Draft January 2022.

Cal Water has also provided an updated water supply and demand assessment for normal, single dry years, and multiple dry years in recently prepared WSAs.<sup>22</sup> The projected water supplies account for purchased water from SFPUC, surface water from Bear Gulch Reservoir, and pumped groundwater. The results are provided in Table 4.17-3, *Cal Water Supply and Demand Comparison: 2025 to 2045 (AFY)*.

**TABLE 4.17-3 CAL WATER SUPPLY AND DEMAND COMPARISON: 2025 TO 2045 (AFY)**

	2025	2030	2035	2040	2045
<b>Normal Year</b>					
Supply Totals	34,757	34,712	35,151	35,652	36,396
Demand Totals	34,230	34,185	34,624	35,125	35,869
Surplus	527	527	527	527	527
<b>Single-Dry Year</b>					
Supply Totals	23,580	23,546	23,835	23,809	21,039
Demand Totals	35,455	35,401	35,851	36,364	37,126
Shortage	(11,875)	(11,855)	(12,016)	(12,555)	(16,087)
<b>Multiple-Dry Year</b>					
<b>First Year</b>					
Supply Totals	23,615	23,483	23,647	23,762	20,954
Demand Totals	36,212	36,154	36,611	37,130	37,904
Shortage	(12,597)	(12,671)	(12,964)	(13,368)	(16,950)
<b>Second Year and Third Year</b>					
Supply Totals	20,492	20,383	20,313	20,594	20,954
Demand Totals	36,212	36,154	36,611	37,130	37,904
Shortage	(15,720)	(15,771)	(16,298)	(16,536)	(16,950)
<b>Fourth Year</b>					
Supply Totals	20,492	20,383	20,313	18,424	18,061
Demand Totals	36,212	36,154	36,611	37,130	37,904
Shortage	(15,720)	(15,771)	(16,298)	(18,706)	(19,843)

<sup>22</sup> EKI Environmental & Water, 2022, *Water Supply Assessment for the Alexandria District for Science and Technology*, prepared by Cal Water Mid-Peninsula District, Draft January 2022.

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**TABLE 4.17-3 CAL WATER SUPPLY AND DEMAND COMPARISON: 2025 TO 2045 (AFY)**

<i>Fifth Year</i>					
Supply Totals	20,492	20,383	18,849	18,424	18,061
Demand Totals	36,212	36,154	36,611	37,130	37,904
Shortage	(15,720)	(15,771)	(17,762)	(18,706)	(19,843)

Note: Volumes provided in acre-feet per year (AFY).

Source: EKI Environmental & Water, 2022, Water Supply Assessment for the Alexandria District for Science and Technology, prepared by Cal Water Mid-Peninsula District, Draft January 2022.

As shown in Table 4.17-3, Cal Water predicts that there will be sufficient water supplies to meet demands through 2045 during normal years. However, there could be a shortage of water supplies in single dry and multiple dry years, if the Bay Delta Plan Amendment is implemented, leading to a reduction in allocations of water from SFPUC. There are numerous uncertainties regarding implementation of the Bay Delta Plan Amendment and these water supply projections are a worst-case scenario. It assumes that the SFPUC and SWRCB do not reach a voluntary agreement and that SFPUC's Alternative Water Supply Program is not implemented. As stated in the 2020 UWMP, if the Bay Delta Plan Amendment is not implemented, SFPUC would be able to supply 100 percent of the projected RWS demands through 2040 during normal, single dry, and multiple dry years.<sup>23</sup>

Cal Water-MPS has developed a WSCP, as described previously, that outlines policies and actions that will be implemented at various shortage levels ranging from up to 10 percent to greater than 50 percent. In addition, as per California Water Code Section 10632.1, all urban water suppliers must submit to DWR by July 1<sup>st</sup> of each year an annual Water Supply and Demand Assessment. The assessment determines if the water supplier is likely to face water shortage and what actions the supplier will take to address any water shortages. Cal Water-MPS submitted the 2024 Annual Water Supply and Demand Assessment on June 14, 2024, which shows a 27 percent reduction in demand over the past four years.<sup>24</sup>

Cal Water-MPS is also working to increase its water supply portfolio through: 1) investment in water conservation, 2) participation in the Regional Groundwater Storage and Recovery Project, and 3) development of a regional water supply reliability study to create a long-term supply reliability strategy through 2050.<sup>25</sup> Additionally, Cal Water has implemented a Development Offset Program, which developer fees for projects that increase demand by more than 50 AFY will fund water supply projects and expanded conservation programs to improve sustainability.

### *Mid-Peninsula Water District*

#### Water Supply Sources

MPWD purchases its entire water supply from the SFPUC, whose main source of water is surface water from the Hetch Hetchy Watershed in the Sierra Nevada mountains. The MPWD has a total of 20 pump

<sup>23</sup> California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District.,

<sup>24</sup> EKI Environment & Water, 2024, 2024 Annual Water Supply and Demand Assessment - Mid-Peninsula District.

<sup>25</sup> EKI Environmental & Water, 2022, *Water Supply Assessment for the Alexandria District for Science and Technology*, prepared by Cal Water Mid-Peninsula District, Draft January 2022.



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stations, 11 water tanks, 13 regulating valves, 813 hydrants and 94 miles of water mains.<sup>26</sup> MPWD mainly serves the City of Belmont and a small portion of the City of San Carlos. The MPWD's sole source of potable water is from the SFPUC RWS and has 8,116 service connections.<sup>27</sup> MPWD has one public water system that had a volume of 974 million gallons (mg). In 2020, MPWD served water to 27,560 people and 93% of MPWD's connections were residential services.<sup>28</sup> Within San Carlos, there are 181 total connections, with: 101 single-family, 30 multi-family, 43 commercial, 2 institutional, 5 irrigation accounts.<sup>29</sup>

Most of San Carlos is within the San Mateo Plain Subbasin of the Santa Clara Valley Groundwater Basin.<sup>30</sup> However, MPWD does not use groundwater, recycled water, or desalinated water. MPWD does not have an available, cost-effective supply of recycled water and does not have a conveyance system for accessing recycled water.<sup>31</sup>

### Water Supply Assurance

The SFPUC has a perpetual commitment (Supply Assurance) to deliver 184 million gallons per day (mgd) to its 24 wholesale customers. The Supply Assurance is allocated through Individual Service Guarantees (ISGs), which represent each wholesale customer's allocation. MPWD's total ISG is 3.891 mgd.<sup>32</sup>

### Water Supply and Demand

The MPWD 2020 UWMP includes a water supply reliability assessment for normal, single dry years, and multiple dry years. The results are provided in Table 4.17-4, *MPWD Supply and Demand Comparison: 2025 to 2045 (MG)*.

**TABLE 4.17-4 MPWD WATER SUPPLY AND DEMAND COMPARISON: 2025 TO 2045 (MG)**

	2025	2030	2035	2040	2045
<b>Normal Year</b>					
Supply Totals	1,044	1,037	1,051	1,055	1,069
Demand Totals	1,044	1,037	1,051	1,055	1,069
Difference	0	0	0	0	0
<b>Single-Dry Year</b>					
Supply Totals	668	661	668	672	580
Demand Totals	1,044	1,037	1,051	1,055	1,069
Shortage	(376)	(376)	(383)	(383)	(489)

<sup>26</sup> Mid-Peninsula Water District, September 2021, *2020 Urban Water Management Plan*, <https://www.midpeninsulawater.org/documents>, accessed March 7, 2024.

<sup>27</sup> Mid-Peninsula Water District, 2021, *2020 Urban Water Management Plan*.

<sup>28</sup> Mid-Peninsula Water District, 2021, *2020 Urban Water Management Plan*.

<sup>29</sup> Mid-Peninsula Water District, 2021, *2020 Water Shortage Contingency Plan*.

<sup>30</sup> San Mateo County, 2019, *San Mateo County GIS open data: San Mateo Plain Subbasin*, <https://data-smcmaps.opendata.arcgis.com/datasets/san-mateo-plain-subbasin?geometry=-122.296%2C37.491%2C-122.242%2C37.503>, accessed October 15, 2024.

<sup>31</sup> Mid-Peninsula Water District, 2021, *2020 Urban Water Management Plan*.

<sup>32</sup> Mid-Peninsula Water District, 2021, *2020 Urban Water Management Plan*.



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**TABLE 4.17-4 MPWD WATER SUPPLY AND DEMAND COMPARISON: 2025 TO 2045 (MG)**

	2025	2030	2035	2040	2045
<b>Multiple-Dry Year</b>					
<b>First Year</b>					
Supply Totals	668	661	668	672	580
Demand Totals	1,044	1,037	1,051	1,055	1,069
Shortage	(376)	(376)	(383)	(383)	(489)
<b>Second Year and Third Year</b>					
Supply Totals	573	566	573	577	580
Demand Totals	1,044	1,037	1,051	1,055	1,069
Shortage	(471)	(471)	(478)	(478)	(489)
<b>Fourth Year</b>					
Supply Totals	573	566	573	507	496
Demand Totals	1,044	1,037	1,051	1,055	1,069
Shortage	(471)	(471)	(478)	(548)	(573)
<b>Fifth Year</b>					
Supply Totals	573	566	526	507	496
Demand Totals	1,044	1,037	1,051	1,055	1,069
Difference	(471)	(471)	(526)	(548)	(573)

Note: Volumes provided in millions of gallons (MG).

Source: Mid-Peninsula Water District, 2021, Tables 7.3, 7-4, and 7.6 of 2020 Urban Water Management Plan. Assumes implementation of the Bay Delta Plan.

With implementation of the Bay Delta Plan, leading to a reduction in water allocations to SFPUC, MPWD predicts a water supply shortage in single- and multiple-dry year scenarios. There are numerous uncertainties regarding implementation of the Bay Delta Plan Amendment, and these water supply projections are a worst-case scenario. It assumes that the SFPUC and SWRCB do not reach a voluntary agreement and that the SFPUC's Alternative Water Supply Program is not implemented. As stated in the 2020 UWMP, if the Bay Delta Plan Amendment is not implemented, SFPUC would be able to supply 100 percent of the projected RWS demands through 2045 during normal, single dry, and multiple dry years.<sup>33</sup> Responses to water shortages are addressed in MPWD's WSCP, which provides direction on specific actions to be taken by staff and customers in response to increasingly severe water supply shortage conditions. Within the plan, six water shortage levels are identified along with the shortage response actions.<sup>34</sup>

### 4.17.1.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant water supply impact if it would:

<sup>33</sup> Mid-Peninsula Water District, September 2021, *2020 Urban Water Management Plan*, <https://www.midpeninsulawater.org/documents>, accessed March 7, 2024.

<sup>34</sup> Mid-Peninsula Water District, September 2021, *2020 Water Shortage Contingency Plan*.

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- UTIL-1 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
- UTIL-2 Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects.
- UTIL-3 In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to water supply.

### 4.17.1.3 IMPACT DISCUSSION

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- |        |   |
|--------|---|
| UTIL-1 | The proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. |
|--------|---|
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The current and projected water demands from Cal Water-MPS and MPWD's 2020 UWMPs are provided in Tables 4.17-1 through 4.17-4. Because both water purveyors have service areas that extend beyond San Carlos, the projections in those tables include the water demands for each water purveyor's service area, which includes San Carlos, Belmont, San Mateo and unincorporated areas of San Mateo County. This discussion evaluates the increase in water demand within the EIR Study Area associated with future development within the buildout horizon of the proposed project as allocated within Cal Water-MPS and MPWD's service areas.

As discussed in detail in Chapter 3, *Project Description*, of this Draft EIR, future development within the buildout horizon of the proposed project includes approximately 8,300 new dwelling units and 8,927,300 square feet of new non-residential land uses (i.e., commercial, office, research and development, and industrial). New construction would comply with the more stringent requirements of CALGreen, California Plumbing Code, and the City's WELO. Only 1.1 percent of the current residences were built after 2010,<sup>35</sup> when the CALGreen Building Code was first implemented and the installation of water-conserving plumbing fixtures and fittings were mandated. Therefore, there are ample opportunities for retrofitting existing residences with low flow plumbing fixtures and all new construction of both residential and commercial land uses would typically achieve a reduction in water usage rates of 20 percent through compliance with the CALGreen Building Code. However, this analysis conservatively does not account for water demand reductions for new construction and water conservation measures for existing residences and commercial properties. The water demand factors used in this analysis were provided by Cal Water-MPS and MPWD.

### Cal Water – Mid-Peninsula District

Based on mapping analysis and consultation with the water purveyors, projected development within Cal Water-MPS service area is estimated to be 6,769 new dwelling units (40 single-family units and 6,729 multi-family residences and accessory dwelling units [ADUs]) and 4,255,219 square feet of non-

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<sup>35</sup> Cal Water Service, 2021, 2020 Urban Water Management Plan, page 31.

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residential space, including commercial, office, research and development (R&D), and industrial land uses. The water demand factors for residential and commercial land uses were provided by Cal Water-MPS.<sup>36</sup> The calculations for the water demand increase with future development are provided in Table 4.17-5, *Increase in Water Demand in Cal Water-MPS Service Area (2045)*.

**TABLE 4.17-5 INCREASE IN WATER DEMAND IN CAL WATER-MPS SERVICE AREA (2045)**

Category	Number (DUs or SF)	Water Use Factor	Increase in Water Demand (gpd) <sup>a</sup>	Increase in Water Demand (AFY)
Single-Family Residential	40	197 gpd/DU	7,880	8.8
Multi-Family Residential	6,729	99 gpd/DU	666,171	746.2
Non-Residential	4,255,219			
Commercial	(626,878)	0.097 gpd/SF	(60,807)	(68.1)
Office	185,260	0.055 gpd/SF	10,189	11.4
R&D	5,322,337	0.18 gpd/SF	958,021	1,073.1
Industrial	(625,500)	0.097 gpd/SF	(60,674)	(68.0)
Irrigation Demand for Non-Residential <sup>b</sup>				94.8
Distribution System Losses				57.5 <sup>c</sup>
Total			1,605,453	1,856

Notes: DUs = dwelling units; SF = square feet; gpd = gallons per day; AFY = acre feet per year; gpcd = gallons per capita per day

a. Demand calculations do not account for water conservation efforts and the effect of reduced water demand for new construction due to compliance with the CALGreen Building Code and the latest California Plumbing Code. Water demand for residential includes outdoor water usage.

b. Assumes outdoor water demand to be 10% of total demand.

c. Losses determined as 3.2 percent of water demand, per Cal Water-MPS recent water loss audit.

Source: PlaceWorks, 2024, Cal Water, 2024.

A supply and demand analysis is provided in Table 4.17-6, *Cal Water-MPS Projected Future- Water Demand (2045) (AFY)*.

**TABLE 4.17-6 CAL WATER-MPS PROJECTED FUTURE WATER DEMAND (2045) (AFY)**

Category	2025	2030	2035	2040	2045
Cal Water-MPS 2020 UWMP	14,418	14,530	14,786	14,977	15,279
Proposed Project	0	0	0	0	0
Total	14,418	14,530	14,786	14,977	15,279

Note: AFY = acre-free per year

Source: PlaceWorks, 2024.

Although Table 4.17-5 shows that future development would result in a water demand of 1,856 AFY, there would be essentially no net increase in demand for the following reasons. All new projects would be subject to implementation of Cal Water's Development Offset Program in that a net increase in water demand greater than 50 AFY for all new development must be offset so there is no net increase in water demand due to the project. Most of the projected water demand in Table 4.17-5 is associated with R&D land use, which typically consists of large projects with a water demand greater than 50 AFY that would

<sup>36</sup> Cal Water-MPS, 2024. Email correspondence between Michael Bolzowski, Cal-Water, and Alexis Mena, PlaceWorks on September 16, 2024.

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be required to comply with Cal Water's Development Offset Program. The other large water demand in Table 4.17-5 is for multi-family residences. Essentially all of the housing opportunity sites listed in the latest San Carlos Housing Element would replace existing land uses with existing water demands and would be subject to the CALGreen Building Code and water efficient landscape irrigation requirements, thus resulting in a net reduction in overall water demand.<sup>37</sup>

In addition, ongoing water conservation measures within Cal Water-MPS' service area have resulted in a 27 percent reduction in demand over the past four years, according to the latest 2024 Annual Water Supply and Demand Assessment.<sup>38</sup> Also, large projects that meet the criteria under SB 610 would need to prepare a WSA to ensure that there are sufficient water supplies for the project, and all project applicants would be required to obtain a will-serve letter from Cal Water-MPS prior to the issuance of building permits. Finally, Cal Water-MPS is accounting for an increase in water demand up to year 2045, as documented in the 2020 UWMP and future projections will be updated with publication of the 2025 UWMP.

However, as shown in Table 14.7-5, there will be a shortage of water supplies for single-dry and multiple-dry years with implementation of the Bay-Delta Plan. One way to offset the shortage of water supplies during normal and multiple dry years would be to continue implementing water conservation measures. Cal Water-MPS enforces water waste prevention and water use restrictions, as authorized by the California Public Utilities Commission (CPUC) and coordinates its efforts with local governments. Cal Water-MPS meters all service connections and bills customers for water use on a monthly basis. All Cal Water Districts use conservation pricing with a three-tier increasing block rate for residential water use. The water agency has a comprehensive public education and outreach program and conducts an annual distribution system audit to reduce water system losses.<sup>39</sup>

In addition, Cal Water-MPS operates rebate, give-away, and direct installation programs aimed at plumbing fixture replacement, irrigation equipment, and landscape efficiency. Cal Water-MPS has a rebate program for high-efficiency toilet replacement, high-efficiency urinal replacement, and high-efficiency clothes washer replacement. Cal Water-MPS also has residential conservation kits that are free, with high-efficiency showerheads, bathroom and kitchen faucet aerators, toilet leak tables, and an outside full-stop hose nozzle. For outdoor water use, Cal Water-MPS provides rebates for smart irrigation controllers, high-efficiency sprinkler nozzles, large rotary nozzle replacement, spray bodies with pressure regulation and check valves, and turf replacement. Cal Water-MPS also provides landscape audits and sprinkler adjustments at no charge, technical assistance through the residential customer portal, and commercial water surveys. Because over 90 percent of the housing in the City of San Carlos was built prior to 2000, there are ample opportunities for retrofitting and replacement of inefficient water fixtures to reduce existing and future water demand. Implementation of these programs in the Cal Water-MPS service area over the last five years have resulted in water savings of approximately 772 AF.<sup>40</sup>

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<sup>37</sup> City of San Carlos, 2024. San Carlos 2023-2031 Housing Element, certified April 25, 2024.

<sup>38</sup> EKI Environment & Water, 2024, 2024 Annual Water Supply and Demand Assessment - Mid-Peninsula District

<sup>39</sup> California Water Service, 2021, 2020 Urban Water Management Plan.

<sup>40</sup> California Water Service, 2021, 2020 Urban Water Management Plan.

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Cal Water-MPS would also implement the WSCP during single- and multiple-dry years, with water restrictions ranging from 10 to >50 percent. If the water shortage is at a Stage 5 level (requiring a demand reduction of up to 50 percent), new water connections must have a net zero demand increase. At a Stage 6 level (demand reduction greater than 50 percent), Cal Water-MPS has a moratorium on new water service connections.

Cal Water-MPS coordinates on an ongoing basis with SFPUC, Bay Area Water Supply and Conservation Agency (BAWSCA), City of San Carlos, City of San Mateo, San Mateo County, and other public and private entities to optimize the use of regional water supplies. Cal Water-MPS and the other Cal Water Districts are currently in the process of developing multiple regional water supply reliability studies using integrated resource planning to create a long-term supply reliability strategy through 2050. The studies will create long-term strategies to address water supply challenges including climate change, new regulatory requirements such as the Bay Delta Plan Amendment, and potential growth in demands due to new development. Cal Water-MPS is also included in the Bay Area Water Supply Reliability Analysis.<sup>41</sup>

### Mid-Peninsula Water District

Based on mapping analysis and consultation with MPWD, future development within MPWD's service area is estimated to be 1,531 new dwelling units (all multi-family residences and ADUs) and 4,672,081 square feet of non-residential land uses (i.e., commercial, office space, R&D and industrial land uses). The water demand factors were obtained from MPWD. The calculations are provided in Table 4.17-7, *Increase in Water Demand in MPWD Service Area (2045)*.

**TABLE 4.17-7 INCREASE IN WATER DEMAND IN MPWD SERVICE AREA (2045)**

Category	Number (DUs or SF)	Water Use Factor	Increase in Water Demand (gpd) <sup>a</sup>	Increase in Water Demand (AFY)
Residential	1,531	104 gpd/DU	159,224	178.4
Non-Residential	4,672,081			
Commercial	75,378	0.045 gpd/SF	3,392	3.8
Office	158,440	0.045 gpd/SF	7,130	8.0
R&D	3,154,263	0.18 gpd/SF	567,767	636.0
Industrial	1,284,000	0.022 gpd/SF	28,248	31.6
Irrigation Demand for Non-Residential <sup>b</sup>				67.9
Distribution System Losses				40.7 <sup>c</sup>
<b>Total</b>			<b>826,415</b>	<b>966.4</b>

Notes: DUs = dwelling units; SF = square feet; gpcd = gallons per capita per day; gpd/SF = gallons per day per square foot; gpd = gallons per day; AFY = acre feet per year; R&D = research and development

a. Demand calculations do not account for water conservation efforts and the effect of reduced water demand for new construction due to compliance with the CALGreen Building Code and the latest California Plumbing Code. Water demand for residential includes outdoor water usage.

b. Assumed to be 10 percent of total water demand, as per MPWD correspondence with PlaceWorks.

c. Losses determined as 4.4 percent of water demand, from MPWD 2020 UWMP.

Source: MPWD, 2021, 2020 UWMP; PlaceWorks, 2024.

<sup>41</sup> California Water Service, 2021, 2020 Urban Water Management Plan.

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The calculations in Table 4.17-7 indicate an increase in water demand within the MPWD service area of 966.4 AFY with the proposed project. Table 4.17-8, *MPWD Water Supply and Demand (2045)*, provides an analysis of the MPWD water supply and demand under normal conditions with the proposed project.

**TABLE 4.17-8 MPWD WATER SUPPLY AND DEMAND (2045)**

Normal Year	Acre-Feet per Year
Existing Demand, from UWMP	3,281
Net Demand from Projected Buildout (2045)	966
<b>Total System Demand</b>	<b>4,247</b>
SFPUC Supply	4,358
Water Supply Surplus	111
Sufficient Water Supply with Proposed Project under Normal Conditions?	Yes

Source: MPWD, 2021, 2020 UWMP; PlaceWorks, 2024.

The calculations in Table 4.17-8 indicate that MPWD has sufficient water supplies to accommodate projected development within the MPWD service area under normal conditions. However, there will not be sufficient water supplies under single- and multiple-dry year conditions, assuming implementation of the Bay Delta Plan Amendment and SFPUC supply restrictions. This would be true even without the additional 966 AFY of water demand with the proposed project. SFPUC indicates that if the Bay Delta Plan Amendment is not implemented, there would be sufficient water supplies for all of its wholesale customers through 2045 with no restrictions. However, MPWD's 2020 UWMP predicts a shortage of 110 AFY in the fourth and fifth year of drought conditions without implementation of the Bay Delta Plan.<sup>42</sup>

As discussed above, MPWD would implement the WSCP during single- and multiple-dry years, with water restrictions ranging from 10 to 50 percent. MPWD coordinates on an ongoing basis with SFPUC, BAWSCA, City of San Carlos, City of Belmont, San Mateo County, and other public and private entities to optimize the use of regional water supplies. There also is the potential for water right transfers within the SFPUC Regional Water System. The Water Shortage Allocation Plan adopted by all BAWSCA agencies and the SFPUC provides the basis for voluntary transfers of water among BAWSCA agencies during periods when mandatory rationing is in place. Also, MPWD has two emergency interconnections—with California Water-MPS and Estero Municipal Improvement District—that would enable the short-term transfer of water due to disruptions in normal supply resulting from an earthquake or other emergency.<sup>43</sup> In addition, MPWD has seen a 10 percent reduction in water demand over the past four years, as documented in the 2024 Water Shortage Report submitted to DWR.<sup>44</sup>

### Summary

As discussed above, both Cal Water-MPS and MPWD are expected to have sufficient water supplies to meet demand under normal conditions with implementation of the proposed project. However, both

<sup>42</sup> Mid-Peninsula Water District, September 2021, *2020 Urban Water Management Plan*.

<sup>43</sup> Mid-Peninsula Water District, September 2021, *2020 Urban Water Management*.

<sup>44</sup> Mid-Peninsula Water District, 2024. Water Shortage Report submitted to DWR.

[https://wuedata.water.ca.gov/wsda\\_tool.asp?wuedata\\_plan\\_id=14430](https://wuedata.water.ca.gov/wsda_tool.asp?wuedata_plan_id=14430) accessed on November 2, 2024.

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water purveyors project water shortages during single- and multiple-dry year conditions, assuming implementation of the Bay Delta Plan and SFPUC supply restrictions.

Future development within the buildout horizon would be required to implement the water-efficient requirements specified in the CALGreen and California Plumbing Codes and the WELO requirements for water efficient landscaping. Cal Water-MPS also implements the Development Offset Program which requires all new developments that will have a net increase in demand of more than 50 AFY to offset the net increase in demand. Future projects that meet the criteria under California Water Code Section 10912 would be required to prepare a WSA that demonstrates that project water demands would not exceed water supplies. In addition, existing residential, commercial, and industrial land uses are expected to decrease their water demands in the future as a result of the implementation of water conservation practices. This can be seen in the reduction in total water demands for both Cal Water-MPS and MPWD over the past four years.

Additionally, the Environmental Management (EM) Element and Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to utilities and service systems, including water supplies and resources. The following General Plan goals, policies, and actions would serve to minimize potential adverse impacts to water supplies with future development:

- **Goal EM-5:** Assure a high level of domestic water quality, promote water conservation and reduce toxics in run-off, including storm- water and the sanitary sewer system.
  - **Policy EM-5.3:** Promote the conservation and efficient use of water in new and existing residences and by commercial and industrial consumers.
  - **Policy EM-5.4:** Encourage the use of drought-tolerant plants and efficient watering techniques for all City landscaping.
  - **Policy EM-5.5:** Recycled water distribution system (purple pipe) should be used for landscaping and other non-potable water uses for residential, commercial and industrial customers, where technically and financially feasible.
  - **Policy EM-5.6:** Continue public education programs on water issues working with water service providers, local non-profits and other environmental organizations, including conservation measures and BMPs for residents, businesses, contractors and City employees.
  - **Policy EM-5.8:** Work with water service providers to provide high quality domestic water.
  - **Action EM-5.5:** Establish water conservation goals for City buildings and operations.
  - **Action EM-5.6:** Evaluate potential incentives for the use of drought-tolerant landscaping and recycled water for landscape irrigation.
  - **Action EM-5.8:** Develop a recycled water implementation plan, which would identify potential sources and uses of recycled water, environmental benefits, capital and operating costs and potential utility providers.

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- **Goal ESPS-3: Agency Coordination:** A resilient San Carlos is well prepared to minimize risks associated with wildfire.
  - **Policy ESPS-3.12:** Ensure adequate water supply is available.
  - **Action ESPS-3.12:** Require new development projects have adequate water supplies to meet the fire-suppression needs of the project without compromising existing fire suppression services to existing uses.
  - **Action ESPS-3.13:** Work with water suppliers (Cal Water) to:
    - maintain and ensure the long-term integrity of future water supply for fire suppression needs;
    - ensure that water supply infrastructure adequately supports existing and future development and redevelopment;
    - provide adequate water flow to combat structural and wildland fires, including during peak domestic demand periods. Water systems shall equal or exceed the standards of the latest edition of National Fire Protection Association (NFPA) 1142, “Standard on Water Supplies for Suburban and Rural Fire-Fighting”;
    - ensure water infrastructure can provide for peak fire flow; and
    - identify where water infrastructure does not allow for peak fire flow and develop a plan to mitigate the deficiencies.
- **Goal ESPS-9:** The City of San Carlos has a sustainable and resilient water supply despite the potential for more frequent and severe drought conditions.
  - **Policy ESPS-9.1:** Support Cal Water’s efforts to increase water storage capacity and water supply reliability, including meeting fire flow requirements.
  - **Policy ESPS-9.2:** Support and partner with Cal Water’s efforts to achieve water demand reductions of 10 percent below State requirements to reduce future constraints during droughts.
  - **Action ESPS-9.1:** Support Cal Water’s efforts to construct additional water storage tanks within City limits, if needed.
  - **Action ESPS-9.2:** Upgrade City waste and wastewater systems to accommodate projected drought-induced changes in water quality and availability and ensure long-term integrity of water supplies.
  - **Action ESPS-9.3:** Partner with Cal Water-MPS to increase customer participation in water conservation programs to reduce water use throughout San Carlos.
  - **Action ESPS-9.4:** Require all new development, reconstruction, and remodel projects to install water saving infrastructure and systems minimizing water use.
  - **Action ESPS-9.5:** Require public and private development projects to design sites, buildings, and structures that minimize water use and increase water recycling.
  - **Action ESPS-9.6:** Develop a San Carlos’ Recycled Water program to nonresidential users.



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- **Action ESPS-9.7:** Consider extending the recycled water pipes from Redwood City into East San Carlos.
- **Action ESPS-9.8:** Determine best methods to use recycled water to irrigate San Carlos public parks, medians, and other publicly owned landscaped areas.

The City would continue to coordinate with Cal Water-MPS and MPWD regarding conservation efforts, demand management measures promoted by the water districts, and implementation of water use restrictions as per the WSCPs. Implementation of Cal Water-MPS and MPWD's WSCPs, compliance with WSA requirements, compliance with existing water conservation regulations, and implementation of the General Plan goals, policies, and actions would reduce water demand with respect to water supplies. In addition, Cal Water, MPWD, and SFPUC plan to implement alternative water supply programs by 2045 in conjunction with BAWSCA. The Bay Delta Plan Amendment may not be enacted in its current structure, making more water available than anticipated in the most recent UWMPs.<sup>45</sup> The SFPUC has indicated that there will be sufficient supplies available to meet all demands of their water purveyors in both normal and drought conditions through 2045 if the Bay-Delta Plan is not implemented. The next iteration of Cal Water-MPS and MPWD UWMPs, due in 2026, will reflect the population projections of the proposed 2045 General Plan Reset and plan accordingly for future water supplies. Finally, compliance with the Cal Water Development Offset Program would provide additional assurance that impacts to water supply would be less than significant. As the City of San Carlos is not a water provider for the EIR Study Area and has limited capacity to directly control water use and water supply planning, the measures described above represent the best water conservation and water supply measures available and the impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>UTIL-2</b>	<b>The proposed project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects.</b>
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As noted in impact discussion UTIL-1, Cal Water-MPS and MPWD have sufficient water supplies available under normal years and both Cal Water-MPS and MPWD would implement their WSCPs under single-year and multiple-year dry conditions. The WSCPs contain water demand mitigation measures that would be implemented at each of the six water shortage levels and each water agency is required to submit an annual report to DWR to assess whether there will be a water shortage in the coming year and what water demand reduction measures will be adopted to address the shortages. It also should be noted that the 2020 UWMPs assume full implementation of the Bay Delta Plan Amendment, which is in a state of flux and most likely would not result in the severe water restrictions that are currently projected. In addition, Cal Water, MPWD, BAWSCA and SFPUC are working on alternative water supplies to address potential future water shortages. All water agencies that serve San Carlos and the SFPUC have an existing water distribution infrastructure that can supply the City without the need to expand their infrastructure facilities. Implementation of the Cal Water-MPS Development Offset Program would

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<sup>45</sup> San Francisco Public Utilities Commission, 2021, 2020 Urban Water Management Plan.

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provide assurance that all future new projects would offset the net increase in water demand, ensuring water supply reliability.

In addition, each large future project would be required to demonstrate the availability of water to serve the development through preparation of a WSA as required by Section 10910 of the California Water Code. As the city is almost entirely built out, most of the new development would be infill projects that are replacing buildings with an existing water demand and water distribution system. Therefore, implementation of the proposed project would not result in the need to construct additional water supply or distribution systems.

Cal Water-MPS and MPWD purchase all of their water from SFPUC. The Harry Tracy Water Treatment Plant (HTWTP), which is owned and operated by SFPUC, filters and disinfects the water supplied from Crystal Springs Reservoir and San Andreas Reservoir before delivery to its wholesale customers on the Peninsula and its retail customers in the City of San Francisco. The HTWTP was recently upgraded and features five new filters, three new ozone generators, and a new seismically resistant 11.5-million-gallon treated water reservoir. The facility now has the capacity to provide 140 MGD for 60 days within 24 hours of a major earthquake. This was part of SFPUC's Water System Improvement Plan to repair, replace, and seismically upgrade the Hetch Hetchy Regional Water System. As part of the upgrades, a new 78-inch treated water pipeline was installed to connect the HTWTP reservoir with the San Andreas Pipeline for delivery to SFPUC's customers.<sup>46</sup> Therefore, the SFPUC has the capability of supplying treated water to all of its wholesale and retail customers under existing and future conditions and no new water treatment facilities are required.

Furthermore, as discussed in impact discussion UTIL-1, the Environmental Management (EM) Element and Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to utilities and service systems, including water facilities. The General Plan goals, policies, and actions listed in impact discussion UTIL-1 would serve to minimize potential adverse impacts related to construction or expansion of water facilities.

In summary, no new water treatment or distribution facilities would be needed with implementation of the proposed project and Cal Water-MPS and MPWD have capital improvement projects to monitor and upgrade their water distribution systems to accommodate future development. In addition, compliance with the City's requirements for new construction and water-efficient landscaping and implementation of the General Plan goals, policies, and actions listed in impact discussion UTIL-1 would result in *less-than-significant* impacts with respect to the need for new and/or expanded water facilities.

**Significance without Mitigation:** Less than significant.

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<sup>46</sup> SFPUC, undated, The Harry Tracy Water Treatment Plant, <https://baywork.org/wp-content/uploads/2017/08/Harry-Tracy-Water-Treatment-Plant-fact-sheet-020817.pdf>, accessed October 29, 2024.

## UTILITIES AND SERVICE SYSTEMS

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UTIL-3	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to water supply.
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The area considered for cumulative water supply impacts is the service areas of Cal Water-MPS and MPWD. Other future projects within MPWD's service area would result in increases in water demand, although new projects within Cal Water-MPS' service area would be required to offset net increases in water demand, thus resulting in no significant increase in overall water demand. Cumulative water demands are not anticipated to require building new water treatment facilities or expansion of existing facilities beyond what is currently planned. All new development projects that meet the SB 610 criteria, such as residential projects with more than 500 dwelling units, would be required to prepare WSAs. The City and the water purveyors would review such projects for adequacy of water supply and the water purveyors would update the UWMP every five years to ensure that there are adequate water supplies and contingency plans for future residents and customers. All new development under the proposed project would require implementing water efficiency and water conservation measures, as per the CALGreen Building Code and the WELO irrigation requirements. Water supply deficits in dry years would be met by implementing the WSCPs and other water conservation efforts.

All cumulative projects would be required to comply with federal, State, and local regulatory requirements, including City ordinances and General Plan goals, policies, and actions. These regulations, and the Cal Water-MPS Development Offset Program would result in a reduction in per capita water use over time, which would ensure that cumulative impacts with respect to water supply would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### 4.17.2 WASTEWATER

#### 4.17.2.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

###### *Federal Regulations*

###### Clean Water Act

The CWA regulates the discharge of pollutants into watersheds throughout the nation. Under the CWA, the USEPA implements pollution control programs, sets wastewater standards, and makes it unlawful to discharge pollutants from a point source into any navigable waters without obtaining a permit. Point sources include any conveyances, such as pipes and man-made drainage channels, from which pollutants may be discharged.

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### National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established as part of the CWA to regulate municipal and industrial discharges to surface Waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable connections and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a wastewater treatment plant.

### *State Regulations*

On May 2, 2006, the SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) and a monitoring and reporting program (Order No. WQ-2013-0058-EXEC) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipes. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent wastewater from entering the storm drain system, and to develop a Sewer System Management Plan (SSMP). The General Waste Discharge Requirement also requires that SSOs be reported to the SWRCB using an online reporting system. The SWRCB has delegated authority to the nine RWQCBs to enforce these requirements within their regions.

The SSMP is required to include an evaluation of the existing sewer collection system and provide a framework for minimizing the frequency and impact of SSOs. The SSMP includes an overflow emergency response plan; a fats, oil, and grease control program; scheduled inspections and condition assessment; design and construction standards; capacity assessment and management; and a monitoring program.

### *Regional Regulations*

The San Francisco Bay RWQCB (Region 2) was created as a result of the California Porter-Cologne Act. The RWQCB issues and enforces NPDES permits within the EIR Study Area, which includes permits for wastewater treatment plants (WWTPs) and industrial waste discharges. NPDES permits allow the RWQCB to regulate where and how waste is disposed, including the discharge volume and effluent limits of waste and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance. The San Francisco Bay RWQCB reissued an NPDES permit in 2023 (Order No. R2-2023-0003) for the Silicon Valley Clean Water Treatment Plant.

### *Local Regulations*

### San Carlos General Plan

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and

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assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.2.3, *Impact Discussion*.

### City of San Carlos Municipal Code

The SCMC is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to wastewater as follows:

- Chapter 13.04, *Sewer Connections*, requires connection permits for all projects that connect to any City sewer and sewer capacity charges are imposed on all new development and redevelopment projects to cover costs for maintaining the City's sewer system infrastructure. The sewer capacity charge is based on the volume of estimated wastewater discharge from each new or expanded connection.
- Chapter 13.05, *Sewer Lateral Inspection, Repair, and/or Replacement*, establishes requirements for property owners to inspect, maintain, repair, and/or replace sewer laterals, sewer relief valves, and sewer backwater valves on each property that is connected to the City's sewer system.
- Chapter 13.08, *Sewer Use*, establishes standards and conditions, as well as charges and fees, for the use of the sewer system. The chapter includes protection of the sewer system from damage; prohibitions on discharges; control of fats, oils, and grease; and regulation of encroachments into easements; and wastewater effluent limitations.
- Chapter 15.04.070, *Title 24, Part 5, California Plumbing Code with appendices*, adopts the latest plumbing code for new construction.

### City of San Carlos Design Guidelines

Section 7 of the City's Design Guidelines includes standards for the City's sewer collection system.<sup>47</sup> These sewer guidelines apply to the construction, repair, and relocation of sanitary sewer facilities in the City, including mains, laterals, services, and all related appurtenances. Section 7 provides guidelines for the design, construction, and abandonment of sewer lines, including design criteria, materials, and installation. More stringent requirements based on specific project conditions may be imposed at the discretion of the Department of Public Works and Engineering Division.

### City of San Carlos Sanitary Sewer Management Plan

The goal of the Sanitary Sewer Management Plan, prepared by the Department of Public Works, is to properly manage, operate, and maintain all parts of the sanitary sewer system. The plan provides procedures to reduce and prevent SSOs and mitigate any overflows that do occur. The SSMP describes

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<sup>47</sup> City of San Carlos, 2016, *Design Guidelines*, <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/Public%20Works/View%20Documents/Standards%20Specifications%20and%20Details/2016%20Design%20Guidelines.pdf>, accessed October 29, 2024.

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how the sanitary sewer system is operated and maintained, efforts to minimize infiltration and inflow, design and performance standards, overflow emergency response plan, a fats, oil and grease control program, and monitoring and audit requirements. As required by law, the SSMP must be updated every five years and must be developed in compliance with the requirements of the SWRCB Waste Discharge Requirements Order No. 2006-003-DWQ, Amended Monitoring and Reporting Program Order No. WQ 2008-002-EXEC, and Order No. WQ 2013-0058-EXEC.<sup>48</sup>

### City of San Carlos Sewer Collection System Master Plan

The Sewer Collection System Master Plan was prepared in 2013 and the City is currently in the process of updating this plan. The Master Plan presents results from modeling efforts to determine the capacity of the collection system, identify deficiencies in flow capacities to convey peak wet weather flows, and recommend capital improvement projects and rehabilitation/replacement programs to correct flow deficiencies.<sup>49</sup>

### Silicon Valley Clean Water Wastewater Treatment Plant NPDES Permit

Silicon Valley Clean Water (SVCW), formerly South Bayside System Authority, provides wastewater treatment for the City of San Carlos, Belmont, Redwood City, and parts of Menlo Park. Wastewater from the City's sewer system is conveyed to the SVCW wastewater treatment plant (WWTP) located in the Redwood Shores area of Redwood City. The NPDES permit for SVCW was issued by the San Francisco RWQCB (Order No. R2-2023-0003; NPDES No. CA0038369). It was adopted on March 8, 2023 and will expire on April 30, 2028. The permit includes discharge prohibitions, effluent limitations and discharge specifications, receiving water limitations, monitoring and reporting requirements, and a pollution minimization program.<sup>50</sup>

## Existing Conditions

### Wastewater Collection

The City of San Carlos owns and operates a sanitary sewer collection system consisting of approximately 104 miles of sewer pipelines and 6 sewer lift stations.<sup>51</sup> The majority of the system is a gravity system that consists mainly of pipe diameters range from 5 inches to 36 inches, with the majority of the system being 6-inch pipes (70 percent). Most of the system was constructed in the 1940s and 1950s with the oldest portions of the system dating back to the 1920s. The primary pipe material is vitrified clay pipe,

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<sup>48</sup> City of San Carlos, updated April 30, 2021, *Sanitary Sewer Management Plan*, <https://www.cityofsancarlos.org/home/showpublisheddocument/850/637565993327530000>, accessed October 29, 2024.

<sup>49</sup> RMC, 2013. City of San Carlos Sewer Collection System Master Plan. Dated January 2013.

<sup>50</sup> California Regional Water Quality Control Board San Francisco Bay Region, 2023, ORDER R2-2023-0003, <https://svcw.org/wp-content/uploads/2024/05/NPDES-PERMIT-2023-2028-Order-R2-2023-0003.pdf>, accessed on October 11, 2024.

<sup>51</sup> City of San Carlos, updated April 30, 2021, *Sanitary Sewer Management Plan*, <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/Public%20Works/View%20Documents/Sewer/Sewer%20System%20Management%20PI.pdf>, accessed October 29, 2024.

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with plastic pipe (HDPE or PVC) used in newer sewer construction and rehabilitation. The system also includes approximately 11,000 private sewer laterals that are maintained by the property owners.<sup>52</sup>

This system serves approximately 28,000 within the San Carlos city limits, plus adjacent areas in unincorporated San Mateo County and a small portion of the City of Belmont that are tributary to the City's sewer system.<sup>53</sup> This system is maintained by the City's Public Works Department, and the wastewater flows are conveyed to SVCW's WWTP.

The City is subject to infiltration and inflow (I/I) with groundwater and stormwater entering the collection system during storm events and resulting in high peak flows during wet weather events. As a result, SSOs have occurred in the past. In 2010, the City entered into a Consent Decree with the San Francisco Baykeeper, which requires the City to implement a number of measures targeted at reducing SSOs.

The City plans to upgrade the aging infrastructure as outlined in the Sewer System Management Plan through projects identified in their Capital Improvement Program.<sup>54</sup> The projects focus on addressing Grade 4 and 5 defects within the collection system and replacing or rehabilitating failing segments of the City's sewer mains. Near-term sewer improvement projects include the following:<sup>55</sup>

- 2023 Sewer Rehabilitation Project, addressing defections system wide at various locations
- 2024 Sewer Lateral Replacement Project, various locations

### Wastewater Treatment

All collected wastewater is conveyed to the San Carlos Pump Station, which is owned and operated by SVCW. It is then pumped to the SVCW WWTP located in the City of Redwood City. The SVCW WWTP in Redwood City serves more than 220,000 residents and businesses in its service area.<sup>56</sup> The existing volume of wastewater collected by the City and treated at the SVCW facility is approximately 2.85 million gallons per day (MGD).<sup>57</sup>

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<sup>52</sup> City of San Carlos, undated. The City of San Carlos Wastewater System, <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/Public%20Works/View%20Documents/Sewer/San%20Carlos%20Sewer%20System%20Ge.pdf> accessed on November 2, 2024.

<sup>53</sup> City of San Carlos, 2013, Sewer Collection Master Plan, <https://cms3.revize.com/revize/sancarlos/Document%20Center/City%20Hall/Departments%20And%20Divisions/Public%20Works/View%20Documents/Sewer/Sewer%20Collection%20System%20Master%20Plan/San%20Carlos%20Sewer%20Collectio.pdf>, accessed on October 29, 2024.

<sup>54</sup> City of San Carlos, 2024, *Public Works Projects*, [https://www.cityofsancarlos.org/city\\_hall/departments\\_and\\_divisions/public\\_works/public\\_works\\_projects.php](https://www.cityofsancarlos.org/city_hall/departments_and_divisions/public_works/public_works_projects.php), accessed October 29, 2024.

<sup>55</sup> City of San Carlos, 2024, *Public Works Projects*, [https://www.cityofsancarlos.org/city\\_hall/departments\\_and\\_divisions/public\\_works/public\\_works\\_projects.php](https://www.cityofsancarlos.org/city_hall/departments_and_divisions/public_works/public_works_projects.php), accessed October 29, 2024.

<sup>56</sup> Mid-Peninsula Water District, September 2021, *2020 Urban Water Management Plan*.

<sup>57</sup> City of San Carlos, 2024. Correspondence between San Carlos Public Works Department, Evan Cai and Alexis Mena of PlaceWorks on October 23, 2024.

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The design capacity for the SVCW WWTP is 29 MGD (dry weather flow), and the total of all wastewater flows to the SVCW in 2020 was 12.6 MGD.<sup>58</sup> SVCW's projections estimate that the total wastewater flow in 2040 will be 17.9 MGD.<sup>59</sup> This is still well below its permitted capacity.

### 4.17.2.2 STANDARDS OF SIGNIFICANCE

The proposed project would have a significant impact related to wastewater service if it would:

- UTIL-4      Require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects.
- UTIL-5      Result in a determination by the wastewater treatment provider which serves or may serve the proposed project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- UTIL-6      In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wastewater.

### 4.17.2.3 IMPACT DISCUSSION

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**UTIL-4      The proposed project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects.**

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Future development within the buildout horizon of the proposed project would result in an increase in wastewater with a population increase of 15,620 residents and 8,927,300 new square feet of non-residential land use. For the EIR Study Area, wastewater generated by the proposed project would be collected by the City's sanitary sewer system and conveyed to the SVCW WWTP. The wastewater generation factors for residential and non-residential land uses were provided by the City of San Carlos. An estimate of the amount of additional wastewater generated by the proposed project was determined, as shown in Table 4.17-9, *Proposed Project Wastewater Demand Increase*.

**TABLE 4.17-9      PROPOSED PROJECT WASTEWATER DEMAND INCREASE**

Category	Proposed Project Net Change (Population or SF)	Wastewater Use Factor	Increase in Wastewater Demand (gpd) <sup>a</sup>	Increase in Wastewater Demand (MGD)
Residential	15,620	47 gpcd	734,140	0.73
Non-Residential	8,927,300	0.097 gpd/SF	865,948	0.87
<b>Total</b>			<b>1,600,088</b>	<b>1.60</b>

Notes: SF = square feet; gpcd = gallons per capita per day; gpd = gallons per day; MGD = millions of gallons per day  
Source: City of San Carlos, 2024; PlaceWorks, 2024.

<sup>58</sup> Mid-Peninsula Water District, September 2021, *2020 Urban Water Management Plan*.

<sup>59</sup> Mid-Peninsula Water District, September 2021, *2020 Urban Water Management Plan*.



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The increase in wastewater demand is estimated to be approximately 1.6 MGD. Combined with the existing average daily flow of 2.85 MGD, the estimated total wastewater discharge from the City of San Carlos in 2045 is estimated to be 4.45 MGD.

The SVCW WWTP has a design capacity of 29 MGD and a projected total wastewater flow of 17.9 MGD in 2040. Therefore, there is a residual projected treatment capacity of 11.1 MGD. The increase in wastewater generation with the proposed project of 1.6 MGD is well within the residual capacity of the SVCW WWTP. In addition, per capita wastewater flow rates are expected to decline with water conservation efforts. Therefore, the SVCW WWTP will be able to accommodate future wastewater flows from the City and other contributors of wastewater flows to the SVCW WWTP.

Additionally, the City of San Carlos implements sewer collection improvement projects as part of their CIP. The goal is to upgrade the aging sewer infrastructure, improve wet weather capacity, and reduce inflow and infiltration (I/I) by replacing existing sewers with larger pipes and rehabilitation/lining of existing sewer lines. Completion of the sewer system upgrades should minimize the potential for future SSOs and thus decrease wastewater flows during wet weather conditions. Also, property owners are required to pay an annual sewer service charge as part of the annual property tax bill. These collected fees are used to fund wastewater collection and treatment system improvements designated in the CIP.

The Environmental Management (EM) Element and Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to utilities and service systems, including wastewater collection systems and treatment facilities. The following General Plan goals, policies, and actions would serve to minimize potential adverse impacts to wastewater infrastructure with future development:

- **Goal EM-5:** Assure a high level of domestic water quality, promote water conservation and reduce toxics in run-off, including storm- water and the sanitary sewer system.
  - **Policy EM-5.1:** Reduce the discharge of toxic materials into the city's sanitary sewer and stormwater collection system by promoting the use of Best Management Practices (BMPs).
  - **Policy EM-5.9:** Sewer service may be extended outside the city limit only as required to protect public health due to failing septic systems in accordance with the following policies:
    - Extension of sewer service would be denied if there is insufficient capacity in the wastewater collection system.
    - No change to the land use would occur.
    - The extension of sewer service could not be used to enable further subdivision.
    - The property owner would be required to annex as such time as a complete consolidation of properties could be annexed.
    - The property owner would be required to complete all improvements necessary to meet City building and engineering standards.
    - Applicant to assure payment of all sewer connection, plan checking and inspection fees.
- **Action EM-5.7:** Amend the Municipal Code to codify the Outside Sewer Service policies for residential uses.

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- **Goal ESPS-9:** The City of San Carlos has a sustainable and resilient water supply despite the potential for more frequent and severe drought conditions.
  - **Action ESPS-9.2:** Upgrade City waste and wastewater systems to accommodate projected drought-induced changes in water quality and availability and ensure long-term integrity of water supplies.
  - **Action ESPS-9.2:** Work with responsible agencies to ensure the design and construction of utility infrastructure, including water supply, wastewater, and storm drain lines, and transportation infrastructure, including streets, trails, shared-use paths, and rail lines, can withstand projected increases in extreme precipitation and storm events.

Implementation of the proposed project would not require the construction or expansion of the SVCW WWTP or sewer collection system beyond what is already planned or under construction. Adherence to the SCMC requirements and the General Plan goals, policies, and actions would reduce wastewater generation rates over time, and therefore impacts associated with the sewer collection and treatment systems would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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UTIL-5	The proposed project would not result in a determination by the wastewater treatment provider which serves or may serve the proposed project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
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As described in impact discussion UTIL-4, the SVCW WWTP is currently permitted to treat up to 29 MGD, and projects a wastewater flow rate to the facility of 17.9 MGD in 2040. The increase in wastewater demand for the City of San Carlos by 2045 is estimated to be 1.6 MGD, as shown in Table 4.17-9, which would result in a total treatment capacity of 19.5 MGD in 2040. This is well below the permitted capacity of 29 MGD. Therefore, the SVCW WWTP would have adequate capacity to serve the project's demand in addition to existing commitments and future contributions to wastewater flow rates from areas outside of San Carlos.

New projects within the EIR Study Area would also be required to comply with the latest CALGreen and California Plumbing codes and implement active and passive water conservation measures. Furthermore, as discussed in impact discussion UTIL-4, the Environmental Management (EM) Element and Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to utilities and service systems, including wastewater treatment capacity. The General Plan goals, policies, and actions listed in impact discussion UTIL-4 would serve to minimize potential adverse impacts related to wastewater collection and treatment capacity.

With continued compliance with applicable regulations, wastewater generated by the proposed project would not exceed the capacity of the SVCW WWTP. Also, the General Plan goals, policies, and actions listed in impact discussion UTIL-4 would ensure that future development would minimize impacts to

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wastewater collection and treatment capacity. Therefore, the proposed project would not result in a determination by the wastewater treatment provider that there is not adequate capacity to serve the EIR Study Area's projected demand in addition to the demands of other wastewater dischargers. Therefore, the impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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UTIL-6	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wastewater.
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The context used for the cumulative assessment is the service area of the SVWC WWTP. In addition to wastewater discharged to the WWTP by the City, there are other dischargers, including Belmont, Redwood City, and portions of Menlo Park.

As discussed in impact discussion UTIL-4, the SVCW WWTP has a design capacity of 29 MGD and a projected total wastewater flow of 17.9 MGD in 2040. Therefore, there is a residual projected treatment capacity of 11.1 MGD and is expected to meet future growth in its service area.

Also, similar to the City of San Carlos, the other dischargers to the WWTP also have sewer collection system capital improvement programs. Future development within the City and WWTP service area would be required to comply with all applicable regulations and ordinances. Project applicants would have to pay wastewater capacity charges and property owners are required to pay an annual sewer service charge, which funds continued improvements to the wastewater collection and treatment system.

Therefore, with continued compliance with applicable regulations and future reductions in wastewater demands with water conservative efforts, cumulative development would not exceed wastewater collection or treatment capacities. Accordingly, the proposed project would not result in a cumulatively considerable impact related to wastewater, and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### 4.17.3 SOLID WASTE

#### 4.17.3.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

###### *Federal Regulations*

The Resource Conservation and Recovery Act of 1976 (Title 40 of the Code of Federal Regulations), Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the

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location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

### *State Regulations*

#### Integrated Waste Management Act

California's Integrated Waste Management Act of 1989 (AB 939) requires that cities and counties divert 50 percent of all solid waste from landfills as of January 1, 2000 through source reduction, recycling, and composting. This act requires that each city and county prepare a Source Reduction and Recycling Element to be submitted to the Department of Resources Recycling and Recovery (CalRecycle), a department within the California Natural Resources Agency. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is calculated as a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. CalRecycle sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate.

#### Mandatory Commercial Recycling Act (AB 341)

AB 341 (Chapter 476) set a statewide solid waste diversion goal of 75 percent by 2020. AB 341, which was passed in 2011 and took effect July 1, 2012, mandates recycling for businesses producing four or more cubic yards of solid waste per week or multi-family residential dwellings of five or more units. Under AB 341, businesses and multi-family dwellings of five or more units in the EIR Study Area must separate recyclables from trash and either subscribe to recycling services, self-haul their recyclables, or contract with a permitted private recycler.

#### Mandatory Organics Recycling Act (AB 1826)

AB 1826, which was enacted in 2014, mandates organic waste recycling for businesses and multifamily dwellings with five or more units. Starting January 1, 2020, all generators of 2 cubic yards or more of garbage, recycling, and compost combined per week must recycle organic waste. Organic waste includes food scraps, food-soiled paper waste, yard trimmings, and landscape materials. Organic waste can be recycled through composting, mulching, and anaerobic digestion which produces renewable energy and fuel. In addition to recycling food scraps, donating surplus food to local food banks can be part of the AB 1826 compliance effort. Multi-family dwellings do not need to have food-waste recycling on-site but must recycle yard and landscape materials. Recology San Mateo County offers these services to businesses and residences to comply with the requirements of AB 1826.

#### California Short-Lived Climate Pollutants Act (Senate Bill 1383)

SB 1383 focuses on the elimination of methane gas created by organic materials in landfills and set targets to achieve a 50 percent reduction in the statewide disposal of organic waste by 2020 and a 75 percent reduction by 2025. Organic waste makes up half of what Californians send to landfills. SB 1383

## UTILITIES AND SERVICE SYSTEMS

requires all businesses and residents to divert organic materials (including food waste, yard waste, and soiled paper products) from the landfill. The regulation took effect on January 1, 2022 and will require that organics collection service be provided to all residents and businesses. The collected organic waste must be recycled into new products, such as compost, mulch, biofuel, and electricity. Each city and county has an annual procurement target based on its population. Also, an edible food recovery program must be established by 2025 with the goal of recovering 20 percent of currently disposed edible food that would otherwise be sent to landfills to feed people in need.<sup>60</sup> Mandated food donors and food recovery organizations and services must keep records of the amount and dates of food donations and acceptances.

### California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires development projects to set aside areas for collecting and loading recyclable materials. This act required CalRecycle to develop a model ordinance for adoption by any local agency to provide adequate areas for the 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 that establishes standards, including space allocation, for the collection and loading of recyclable materials.

### CALGreen Building Code

As previously described in Section 4.17.1.1 (Water Regulatory Setting) CALGreen establishes building standards for sustainable site development. Sections 4.408 and 5.408, *Construction Waste Reduction Disposal and Recycling*, mandate that, in the absence of a more stringent local ordinance, a minimum of 65 percent of nonhazardous construction and demolition debris generated during most new construction must be recycled or salvaged. CALGreen requires developers to prepare and submit a Construction and Demolition Recycling & Waste Reduction Plan, which is submitted to the City for approval, or use a waste management company with verifiable documentation. The waste management plan must:

- Identify the materials to be diverted from disposal by recycling, reuse on the project, or salvage for future use or sale.
- Specify if materials will be sorted on-site or mixed for transportation to a diversion facility.
- Identify the diversion facility where the material collected can be taken.
- Identify construction methods employed to reduce the amount of waste generated.
- Specify that the amount of materials diverted shall be calculated by weight or volume, but not by both.

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<sup>60</sup> CalRecycle, 2021, SB 1383 Education and Outreach Resources, <https://www.calrecycle.ca.gov/organics/slcp/education>, accessed October 23, 2024.

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### *Regional Regulations*

#### San Mateo County Environmental Health Division

San Mateo County Environmental Health Division (SMCEHD) is the State-certified Local Enforcement Agency for solid waste in San Mateo County. The Solid Waste Program under the SMCEHD ensures that businesses, garbage collection and disposal companies, and residents follow the federal, State, and local standards and permitting requirements for solid waste. Inspectors from the Solid Waste Program issue permits and inspect four transfer/material recovery facilities and one anaerobic digestion facility, as well as one active landfill, Ox Mountain, in Half Moon Bay.<sup>61</sup> These facilities are monitored for compliance with State standards for the proper handling and disposal of solid waste. Seventeen closed landfills in different locations throughout the County are also monitored.

#### San Mateo County Office of Sustainability: Solid Waste Management

San Mateo County Office of Sustainability: Solid Waste Management administers and implements the solid waste management and resource conservation programs and policies throughout the County. The Waste Reduction Program's mission is to advance environmental sustainability by working with residents, businesses, and institutions throughout San Mateo County to encourage environmental stewardship, implement resource conservation programs and policies, and ensure compliance with the California solid waste regulations.<sup>62</sup>

#### RethinkWaste (South Bayside Waste Management Authority)

RethinkWaste, also known as the South Bayside Waste Management Authority, is a joint powers authority formed by eleven local jurisdictions (Member Agencies) within San Mateo County, including the City of San Carlos. RethinkWaste owns and manages the Shoreway Environmental Center in San Carlos, which receives all the recyclables, green waste, and garbage collected from the Member Agencies. RethinkWaste also provides oversight and management of service providers that collect, process, recycle, and dispose of materials and educates residents and businesses through waste reduction, recycling, and solid waste programs. South Bay Recycling operates the Shoreway Environmental Center on behalf of RethinkWaste. Recology San Mateo County provides recycle, compost, and garbage collection services for residents and businesses in San Mateo County.

### *Local Regulations*

#### San Carlos General Plan

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and

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<sup>61</sup> San Mateo County Health, 2023, Solid Waste Program, <https://www.smchealth.org/solidwaste>, accessed October 23, 2024.

<sup>62</sup> San Mateo County Office of Sustainability, 2024. Solid Waste Management, <https://performance.smcgov.org/stories/s/Office-of-Sustainability-Solid-Waste-Management-40/nm65-ibfd/>, accessed October 23, 2024.

## UTILITIES AND SERVICE SYSTEMS

assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.3.3, *Impact Discussion*.

### City of San Carlos Municipal Code

The SCMC is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to solid waste as follows:

- Chapter 8.04, *Solid Waste*, also known as the solid waste ordinance, contains provisions for solid waste collection and disposal. The chapter requires all residential, commercial, or industrial properties in the City to contract with a City franchisee for the removal and disposal of solid waste generated by the property. The franchisee is authorized to charge all customers a fee for the collection and transport of the solid waste.
- Chapter 8.05, *Recycling And Diversion Of Construction And Demolition Debris*, requires that each local jurisdiction in the State divert fifty percent of solid waste from landfill by December 31, 2000, through source reduction, recycling, and composting activities. This chapter establishes diversion rates for construction and demolition debris to meet the AB 939 mandates and reduce the amount of solid waste that is landfilled. In general, projects are required to divert at least 60 percent of all generated tonnage. Every project applicant must submit a waste management plan (WMP) to the Department of Planning and Building as part of the building permit process. The WMP shall include:  
1) the estimated volume or weight of project construction and demolition debris, by materials type;  
2) the maximum volume and weight of these materials that can feasibly be diverted via reuse or recycling; 3) the vendor or facility that will be used to collect or receive the material; and 4) the estimated volume or weight of construction and demolition debris that will be landfilled.
- Chapter 8.24, *Recycling and Collection of other Wastes*, regulates the location, height, size and design features of recycling and trash enclosures and containers. These regulations are necessary in order to lengthen the life span of the landfill and decrease the cost of hauling to the landfill in addition to encourage the reuse of recyclable materials.
- Chapter 8.25, *Mandatory Commercial and Multifamily Residential Recycling*, establishes requirements for the collection, recycling, and processing of recyclable and organic materials generated from commercial facilities, multi-family dwellings, and special events. These requirements are intended to assist the City in meeting the recycling and landfill diversion goals and reduce GHG emissions. Multi-family generators must participate in the programs covered by this chapter and segregate recyclable materials from garbage and deposit them in designated containers provided by the solid waste collector. These requirements apply to all commercial or multi-family solid waste customers that generate two cubic yards or more of garbage per week.
- Chapter 8.60, *Mandatory Organic Waste Disposal Reduction*, includes the State regulations and mandatory requirements for organic waste recycling and reduction.

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### City of San Carlos Model Disposable Food Service Ware Ordinance

Adopted in October 2021 by the San Carlos City Council, the Model Disposable Food Service Ware Ordinance to reduce waste in the environment and litter in rivers and ocean, protect public health, and reduce dependence on plastic.<sup>63</sup> This Ordinance will apply to food facilities that:

- Operate within the unincorporated areas of San Mateo County and cities in the county that adopt the County of San Mateo's Disposable Food Service Ware Ordinance; and
- Provide prepared food to the general public.

## Existing Conditions

### *Solid Waste Collection*

Recology San Mateo County (Recology) provides recycling, compost, and garbage collection in San Carlos and San Mateo County. Recology offers the following for commercial customers: 1) single-stream recycling including metal, plastic, paper, and glass; 2) compost collection, including food scraps, soiled paper products, and landscaping trimmings; and 3) landfill disposal for all other trash and garbage. All waste is transported to the Shoreway Environmental Center in the City of San Carlos, which consists of a transfer station, a materials recovery facility in which recyclable materials are retrieved from the waste stream and shipped to recyclers, and a public recycling facility. The facility also accepts construction and demolition debris. The Shoreway Environmental Center has a maximum permitted throughput of 3,000 tons/day.<sup>64</sup>

### *Solid Waste Disposal*

South Bay Recycling (SBR) is the contractor hired by RethinkWaste to operate the Shoreway Environmental Center. SBR is responsible for the marketing and selling of recyclable materials to domestic and overseas markets, transporting loads of organic waste to Blossom Valley Organics in Vernalis and Newby Island in San Jose, transporting garbage to the Ox Mountain Landfill in Half Moon Bay, and delivering construction and demolition debris to Zanker Recycling in San Jose.<sup>65</sup>

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<sup>63</sup> County of San Mateo, 2022, Model Disposable Food Service Ware Ordinance Summary, [https://www.smcsustainability.org/wp-content/uploads/Foodware\\_Aware\\_Summary\\_Final.pdf](https://www.smcsustainability.org/wp-content/uploads/Foodware_Aware_Summary_Final.pdf), accessed on October 1, 2024.

<sup>64</sup> California Department of Resources Recovery and Recycling, 2024, Solid Waste Information System, SWIS Facility Detail: Shoreway Environmental Center, <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1575?siteID=3236>, accessed October 23, 2024.

<sup>65</sup> RethinkWaste, 2022, Service Providers and Area Map, <https://rethinkwaste.org/about/service-area-map-providers/>, accessed November 2, 2022.



## UTILITIES AND SERVICE SYSTEMS

### Landfills

The majority of the solid waste generated in San Carlos is transported to the Corinda Los Trancos Landfill (Ox Mountain Landfill) near Half Moon Bay.<sup>66</sup> The landfill is expected to reach capacity in 2034.<sup>67</sup> The Corinda Los Trancos Landfill has a daily maximum throughput of 3,598 tons per day and a remaining capacity of 22 million cubic yards.<sup>68</sup>

After solid waste is collected and sorted at the San Carlos Transfer Station, it is transported to the Los Trancos Canyon (Ox Mountain) Landfill in Half Moon Bay. Table 4.17-10, *Landfill Capacity*, provides more information on the landfill capacity and closing date for the primary landfill that receives solid waste from the City of San Carlos.

**TABLE 4.17-10 LANDFILL CAPACITY**

Landfill Name and Location	Maximum Permitted Throughput, tons/day	2023 Average Disposal, <sup>a</sup> tons/day	Residual Disposal Capacity, tons/day	Remaining Capacity, cubic yards	Estimated Closing Year
Ox Mountain Landfill (Corinda Los Trancos) Half Moon Bay, CA 94019	3,598	1,808	1,790	22,180,000	2034

Notes:

a. Average daily disposal is estimated based on 300 operating days per year, assuming the landfill is open six days per week except certain holidays.

Data is based on total 2020 tonnage for this landfill from CalRecycle's Landfill Summary Tonnage Report and SWIS Facility/Site Activity Details.

Source: CalRecycle, 2023. Landfill Tonnage Reports, accessed on October 23, 2024 at <https://www2.calrecycle.ca.gov/LandfillTipFees>

### Solid Waste Diversion and Recycling

As of 2022, the latest year for which data are available, there were numerous solid waste diversion programs in San Carlos, including those for composting, Facility Recovery, household hazardous waste collection, policy incentives, public education, recycling, source reduction at businesses and government entities, and special waste materials such as tires, scrap metal, wood waste, and concrete/asphalt/rubble.<sup>69</sup>

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 2022, the target disposal rates for San Carlos were 7.5 pounds per day (ppd) per resident and 14.4 ppd

<sup>66</sup> CalRecycle, 2024, Jurisdictional Disposal and Alternative Daily Cover (ADC) Tons by Facility. <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>, accessed October 23, 2024.

<sup>67</sup> CalRecycle, 2024 (accessed), SWIS Facility/Site Activity Details - Corinda Los Trancos Landfill ( Ox Mtn) (41-AA-0002), <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1561?siteID=3223>, accessed October 2, 2024.

<sup>68</sup> CalRecycle, 2024 (accessed), SWIS Facility/Site Activity Details - Corinda Los Trancos Landfill ( Ox Mtn) (41-AA-0002), <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1561?siteID=3223>, accessed October 2, 2024.

<sup>69</sup> CalRecycle, 2024 (accessed), Jurisdiction Waste Diversion Program Summary, <https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionSummary>, accessed on October 4, 2024.

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per employee. The actual disposal rates in 2022were 6.8 ppd per resident and 10.7 ppd per employee, which are below target rates and thus are consistent with AB 939.<sup>70</sup>

4.17.3.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to solid waste if it would:

- UTIL-7      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.
- UTIL-8      Be out of compliance with federal, State, and local management and reduction statutes and regulations related to solid waste.
- UTIL-9      In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to solid waste.

4.17.3.3 IMPACT DISCUSSION

UTIL-7	The proposed project would not 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.
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Under the proposed project, the population is anticipated to increase by 46,450 residents and 47,320 jobs. As shown in Table 4.17-11, *Increase in Solid Waste Generation (2045)*, this level of growth would result in an increase in solid waste of approximately 195 tons per day, or 71,210 tons per year. These numbers are conservative because, with continued recycling and waste reduction programs implemented by the City and ReThinkWaste, the waste generation rates would be reduced over time.

TABLE 4.17-11 INCREASE IN SOLID WASTE GENERATION RATES (2045)

Category	Proposed Project Net Change (Population or SF)	Solid Waste Generation Rate (ppd)	Increase in Solid Waste (tons/day)	Increase in Solid Waste (tons/year)
Residents	15,620	6.8	53	19,384
Jobs	26,540	10.7	142	51,826
Total			195	71,210

Source: CalRecycle, 2023; PlaceWorks, 2023.

As shown in Table 4.17-11, an increase of 195 tons/day with the proposed project would be about 11 percent of the current residual capacity of 1,790 tons/day at Ox Mountain Landfill. In addition, some of the solid waste from the City of San Carlos is transported to other landfills in the Bay Area and the majority of the waste generated in the City is diverted from landfill disposal through recycling and composting. This estimate conservatively assumes that all of the generated waste is landfilled. The

<sup>70</sup> CalRecycle, 2022, Jurisdiction Diversion/Disposal Rate Detail, <https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006>, accessed on October 4, 2024.

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results in Table 4.17-11 show that the proposed project would not generate solid waste in excess of the capacity of the landfills that serve the City.

Furthermore, all new development pursuant to the proposed project would require compliance with Division 4.4 of the 2022 CALGreen Building Code, which requires that at least 65 percent of nonhazardous construction and demolition waste from residential and nonresidential construction operations be recycled and/or salvaged for reuse. New development and redevelopment would also need to comply with the requirements of AB 341 that mandates recycling for commercial and multifamily residential land uses.

The Environmental Management (EM) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to utilities and service systems, including solid waste. The following General Plan goal, policies, and actions would serve to minimize potential adverse impacts on solid waste:

- **Goal EM-12:** Reduce solid waste disposal and increase recycling.
  - **Policy EM-12.1:** Work with the local waste management authority to increase community diversion of solid waste that meets or exceeds the targeted rate in the Climate Action Plan.
  - **Policy EM-12.2:** Minimize City government waste by expanding reduction, recycling and composting programs and practicing reuse.
  - **Policy EM-12.3:** Encourage the public and private sectors to utilize reusable, returnable, recyclable, environmentally friendly products and repairable goods through incentives, educational displays and activities, as well as City purchasing policies and practices.
  - **Action EM-12.1:** Implement measures in the Climate Action Plan to reduce solid waste and increase recycling and reuse.
  - **Action EM-12.2:** Consider incentives to households and businesses to reduce the volume of solid waste sent to the landfill.
  - **Action EM-12.3:** Require adequate facilitation of recycling in all new development and new commercial tenancies.
  - **Action EM-12.4:** Encourage recycling programs in existing multi-family buildings.
  - **Action EM-12.5:** Encourage building deconstruction in lieu of demolition. Require a construction and demolition debris waste plan to maximize recycling rates.
  - **Action EM-12.6:** Encourage the use of recycled pavement and/or permeable products for public and private parking lots and driveways.
  - **Action EM-12.7:** Support the commercial food scraps and organics recycling program.
  - **Action EM-12.8:** Evaluate options for increasing ease of properly disposing household hazardous waste, including but not limited to electronics, fluorescent bulbs, thermometers, spent fire extinguishers and pharmaceuticals.

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## UTILITIES AND SERVICE SYSTEMS

With continued compliance with the applicable regulations, leading to increased recycling and waste diversion, and adherence to the General Plan goal, policies, and action listed above, anticipated rates of solid waste disposal from the proposed project would be less than significant with respect to permitted landfill capacity. In addition, the City is well below the CalRecycle target disposal rates and meets the regulatory requirements of AB 939. Therefore, implementation of the proposed project would not generate solid waste in excess of State and local standards, or in excess of the capacity of the landfills, or otherwise impair the attainment of solid waste reduction goals and the impact is *less than significant*.

**Significance without Mitigation:** Less than significant.

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UTIL-8	The proposed project would not be out of compliance with federal, State, and local management and reduction statutes and regulations related to solid waste.
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As discussed under impact discussion UTIL-7, Recology San Mateo County, which serves the EIR Study Area, complies with all State requirements to reduce the volume of solid waste through recycling and organic waste diversion. The City's per capita disposal rates of 6.8 ppd per resident and 10.7 ppd per employee are well below the CalRecycle targets of 7.5 pounds per day (ppd) for residents and 14.4 ppd for employees. In addition, all future development would comply with Division 4.4 of the CALGreen Building Code, which requires that at least 65 percent of nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

Future development would also comply with AB 341, which mandates recycling for commercial and multifamily residential land uses as well as schools and school districts. Additionally, future businesses that generate organic waste in amounts over a certain threshold would be mandated to recycle organic matter in accordance with AB 1826. Therefore, the City and Recology would comply with all applicable federal, State, and local solid waste regulations, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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UTIL-9	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to solid waste.
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The area considered for cumulative impacts to solid waste disposal facilities is San Mateo County, which is serviced by Recology San Mateo County. As reported by ABAG, the total population of San Mateo County is expected to increase from 796,925 to 916,590 by 2040.<sup>71</sup> Assuming that solid waste generation increases at the same rate as the population (15 percent), the increase in the amount of waste generated in the County by 2040 would be about 2,079 tons per day.<sup>72</sup> Conservatively assuming that all

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<sup>71</sup> ABAG, 2018. Plan Bay Area Projections 2040.

<sup>72</sup> 2023 Average Disposal to Ox Mountain Landfill x 0.15 = 1,808 tons/day x 0.15 = 2,079 tons/day.

## UTILITIES AND SERVICE SYSTEMS

of this waste is landfilled, although the 2022 diversion rate by ReThinkWaste is about 65 percent<sup>73</sup>, the additional waste generated by San Mateo County, including the waste generated by San Mateo with the proposed project, would still be only about 63 percent of the daily residual capacity of Ox Mountain Landfill.

In addition, new development within San Mateo County would comply with Division 4.4 of the 2022 CALGreen Building Code, which requires that at least 65 percent of nonhazardous construction and demolition waste from residential and nonresidential construction operations be recycled and/or salvaged for reuse. This would also reduce the volume of solid waste transported to the landfills. Continued compliance with the applicable regulations and an increase in recycling and landfill diversion rates would ensure that solid waste cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### 4.17.4 STORMWATER INFRASTRUCTURE

#### 4.17.4.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

The regulatory framework for stormwater is described in detail in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR. The regulatory requirements that pertain solely to storm drain systems are repeated below.

##### *Federal Regulations*

##### National Pollutant Discharge Elimination System

The NPDES permit program was established by the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States from their municipal separate storm water systems (MS4s). Under the NPDES program, all facilities that discharge pollutants into waters of the United States are required to obtain an NPDES permit. Requirements for stormwater discharges are also regulated under this program. The City is within the jurisdiction of the San Francisco Bay RWQCB (Region 2) and is subject to the waste discharge requirements of the Municipal Separate Storm Sewer System (MS4) Permit (Order No. R2-2022-0018 and NPDES Permit No. CAS612008).<sup>74</sup>

Under Provision C.3 of the MS4 Permit, the permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and

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<sup>73</sup> ReThinkWaste, 2024, *Annual Report 2023*, <https://rethinkwaste.org/wp-content/uploads/2024/05/2023-Annual-Report.pdf>, accessed November 4, 2024.

<sup>74</sup> California Regional Water Quality Control Board, San Francisco Bay Region, May 2022, *Municipal Regional Stormwater NPDES Permit, Order No. R2-2022-0018, NPDES Permit No. CAS612008*, [https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/stormwater/MRP/mrp5-22/R2-2022-0018.pdf](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/MRP/mrp5-22/R2-2022-0018.pdf), accessed October 21, 2024.

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redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows. This goal is accomplished primarily through the implementation of low impact development techniques.

### *State Regulations*

On April 7, 2015, the SWQCB adopted an amendment to the Water Quality Control Plan for Ocean Waters of California to control trash. In addition, the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California added the section: Part 1, Trash Provisions. Together, they are collectively referred to as “the Trash Amendments.” The purpose of the Trash Amendments is to provide statewide consistency for the RWQCBs in their regulatory approach to protect aquatic life and public health beneficial uses, reduce environmental issues associated with trash in State waters, and focus limited resources on high-trash-generating areas.<sup>75</sup>

The Trash Amendments apply to all Phase I and II permittees under the NPDES municipal separate storm sewer systems (MS4) permits. Compliance with the Trash Amendment requires municipalities to install certified trash treatment control systems on all catch basins no later than December 2, 2030.<sup>76</sup>

### *Regional Regulations*

#### San Mateo Countywide Water Pollution Prevention Program

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) is a partnership of the City/County Association of Governments (C/CAG), 20 incorporated Cities within the County, and the County of San Mateo, which share a common MS4 permit. This partnership also relies on each of the municipalities to implement local stormwater pollution prevention and control activities for its own local storm drain systems.

Post-construction stormwater quality requirements pursuant to the SMCWPPP are described in the C.3 Regulated Projects Guide (Version 1.0) issued in January 2020. The C.3 Regulated Projects Guide includes instructions for implementing site design measures, source controls, stormwater treatment measures, construction site controls, and low-impact development measures.

#### San Mateo County Stormwater Resource Plan

The San Mateo County Stormwater Resource Plan (SRP) is a comprehensive document that addresses specific stormwater runoff issues in the County with a watershed-based approach. The main goals of the SRP are to identify and prioritize opportunities to better utilize stormwater as a resource in San Mateo County through a detailed analysis of watershed processes, surface and groundwater resources, input

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<sup>75</sup> State Water Resources Control Board, April 7, 2015, *Amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, [https://www.waterboards.ca.gov/water\\_issues/programs/trash\\_control/docs/01\\_final\\_sed.pdf](https://www.waterboards.ca.gov/water_issues/programs/trash_control/docs/01_final_sed.pdf), accessed October 21, 2024.

<sup>76</sup> State Water Resources Control Board, 2023, *Storm Water Program - Trash Implementation Program*, [https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/trash\\_implementation.html](https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html), accessed October 21, 2024.

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from stakeholders and the public, and analysis of multiple benefits that can be achieved through strategically planned stormwater management projects.<sup>77</sup> These projects aim to capture and manage stormwater more sustainably, reduce flooding and pollution associated with runoff, improve biological functioning of plants, soils, and other natural infrastructure, and provide many community benefits, including cleaner air and water and enhanced aesthetic value of local streets and neighborhoods. SB 985 (Pavley, 2014) requires SRPs to be developed to be eligible for funding from future State bond measures for stormwater and dry weather capture projects.<sup>78</sup>

### *Local Regulations*

#### San Carlos General Plan

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.4.3, *Impact Discussion*.

#### City of San Carlos Municipal Code

The SCMC is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to stormwater as follows:

- Chapter 13.14, *Stormwater Management and Discharge Control*, regulates non-stormwater discharges to the municipal separate storm sewer; discharge to municipal separate storm sewers from spills, dumping or disposal of materials other than stormwater; and reduces pollutants in stormwater discharges to the maximum extent practicable.
- Chapter 13.16, *Storm Drainage Fees*, allows for the collection of storm drainage fees pursuant to Health and Safety Code Section 5471 et seq. Fees collected from this chapter shall be used for the acquisition, construction, reconstruction, maintenance and operation of storm drainage facilities or programs.
- Section 17.16.270, *Storm Drainage Facilities*, requires the subdivider to dedicate rights-of-way for storm drainage purposes that conform to the boundary lines of any natural watercourse, channel, stream, or creek that traverses the subdivision.

#### City of San Carlos Citywide Storm Drain System Master Plan

Adopted in 2017, the Citywide Storm Drain System Master Plan (SDMP) identified causes of flooding within the storm drain system and developed alternatives for improvements that address the flooding.

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<sup>77</sup> City/County Association of Governments of San Mateo, February 2017, *Stormwater Resource Plan for San Mateo County*, <https://ccag.ca.gov/wp-content/uploads/2017/02/SMC-SRP-Report-FINAL-1.pdf>, accessed October 21, 2024.

<sup>78</sup> City/County Association of Governments of San Mateo, 2022, *San Mateo Storm Water Resources Plan*, <https://ccag.ca.gov/srp/>, accessed October 21, 2024.

## UTILITIES AND SERVICE SYSTEMS

The City has experienced periodic flooding over the years and these flooding events are generally due to a combination of issues, including storm drain inlet blockages from leaves and debris, stormwater volumes that are greater than the capacity of the City storm drain system, and backwater and overtopping from creeks.

The Storm Drain Master Plan was created to develop alternative improvement projects that would improve the capacity of the system. These alternatives were compared and ranked in order to develop a prioritized Capital Improvement Program (CIP) that addresses the capacity issues and seeks to prioritize the more severe flooding problems.<sup>79</sup>

### City of San Carlos Storm Drain Standards

The City's Storm Drain Standards provides guidelines for the design and construction of storm drain projects. The guidelines establish minimum acceptable design criteria. More stringent requirements based on specific project conditions may be imposed at the discretion of Public Works and Utilities Department.

### City of San Carlos Green Infrastructure Plan

Adopted in 2019, the Green Infrastructure Plan describes how the City will, over time, transition its existing "gray" (i.e., traditional) infrastructure to "green" infrastructure. This document also provides guidance to meet stormwater pollutant load reduction goals and creates a process for prioritizing the integration of Green Infrastructure (GI) into CIP projects. Green infrastructure uses vegetation, soil, and other elements to capture, treat, infiltrate and slow urban runoff. GI measures could include stormwater planters, rain gardens, tree wells, pervious pavement, infiltration systems, and green roofs.<sup>80</sup>

## Existing Conditions

The City of San Carlos maintains all stormwater facilities within the city. Stormwater runoff in the City of San Carlos is conveyed to San Francisco Bay via a network of 56 miles of storm drains, creeks and drainage channels, and three pump stations.<sup>81</sup> The drainage pipes range in size between 4-inch to 72-inch diameter. San Carlos is responsible for maintenance of culverts under roadways and creek segments with easements. Inaccessible creek areas and upstream reaches in the hills are generally on private property and respective property owners are responsible for maintenance. The City addresses flooding constraints through their CIP, which prioritizes improvement projects for the drainage system.

The City's drainage system is divided into five watersheds, as described in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR (see Figure 4.9-1, *San Carlos Watersheds*). The five watersheds include Cordilleras Creek, Brittan Creek, Pulgas Creek, Lower Pulgas Creek and Belmont Creek.<sup>82</sup> Pulgas and

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<sup>79</sup> City of San Carlos, 2017, Citywide Storm Drain System Master Plan, dated April 2017.

<sup>80</sup> City of San Carlos, 2019, Green Infrastructure Plan, <https://cms3.revize.com/revize/sancarlos/SanCarlos-GI-Plan-FINAL06-2019-Rev2.pdf>, accessed on October 11, 2024.

<sup>81</sup> City of San Carlos, 2017, Citywide Storm Drain System Master Plan, dated April 2017.

<sup>82</sup> City of San Carlos, 2017, Citywide Storm Drain System Master Plan, dated April 2017.



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Brittan Creeks are the two main creeks that are entirely within the City of San Carlos. The lengths of these creeks are mostly unhardened channels, with hardened channels in the upper reaches and the lower flatlands in eastern San Carlos, where Brittan Creek joins Pulgas Creek via an underground conduit (paralleling El Camino Real). Following the confluence of Pulgas Creek and Brittan Creeks, the combined flow drains into the Smith Slough, south of Bair Island.

### 4.17.4.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to stormwater infrastructure if it would:

- UTIL-10      Require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.
- UTIL-11      In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to stormwater infrastructure.

### 4.17.4.3 IMPACT DISCUSSION

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UTIL-10	<b>The proposed project would not require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.</b>
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New development and/or redevelopment as part of the proposed project would result in an increase in impervious surfaces, which in turn could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause nuisance flooding in areas without adequate drainage facilities. However, most of the City is already built out and future development sites are in infill areas that are already developed and paved. Therefore, new development on these sites should not create a significant increase in impervious surfaces.

Also, regulated projects that create or replace 5,000 square feet or more of impervious surface would be required to implement site design, source control, and stormwater treatment and runoff measures using specific numeric sizing criteria based on the volume and flow rate of stormwater that is generated. Each project undergoes review by City personnel to ensure that the regulatory requirements for temporary on-site stormwater runoff retention have been met. This would minimize the amount of stormwater runoff from future development in the EIR Study Area.

With the implementation of these provisions for future development, there should not be significant increases in stormwater runoff to the City's storm drain system. The construction of new stormwater facilities through the CIP, implementation of best management practices and on-site stormwater control measures, and preparation of the required documents and review by the City would serve to minimize any potential impacts associated with stormwater.

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The Environmental Management (EM) Element and Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider impacts to utilities and service systems, including stormwater infrastructure. The following General Plan goals, policies, and actions would serve to minimize potential adverse impacts to water quality and stormwater discharge:

- **Goal EM-2:** Promote healthy streams and riparian corridors.
  - **Policy EM-2.7:** Retain Pulgas, Brittan, Cordilleras and Belmont Creek channels and their 100-year floodplains wherever possible as natural open space areas. These areas are to function as storm drainage facilities and as open space greenbelts to support natural habitat.
  - **Action EM-2.2:** Consider establishing incentives to stabilize creek banks utilizing natural methods.
- **Goal ESPS-2:** Reduce hazards associated with flooding and inundation.
  - **Policy ESPS-2.1:** Improve and maintain City storm drainage infrastructure in a manner that reduces flood hazards.
  - **Policy ESPS-2.2:** Maintain and prioritize restoration of a healthy riparian corridor in City-maintained flood control channels such as Pulgas Creek and Belmont Creek to reduce the risk of flooding due to erosion, siltation, blockage, and heavy undergrowth; and increase community access to channels with improved stormwater and flood management strategies.
  - **Policy ESPS-2.3:** Maintain a strong and enforceable Stream Development and Maintenance Ordinance for all city creeks and their tributaries.
  - **Policy ESPS-2.4:** Minimize impervious surfaces to reduce stormwater runoff and increase flood protection.
  - **Policy ESPS-2.7:** Coordinate with neighboring jurisdictions on approaches to flooding and creek maintenance.
  - **Policy ESPS-2.10:** Incorporate stormwater drainage systems in development projects to effectively control the rate and amount of runoff to prevent increases in downstream flooding potential.
  - **Action ESPS-2.2:** Amend the Stream Development and Maintenance Ordinance to: (1) include all creeks and tributaries, including Pulgas Creek and Belmont Creek, to strengthen the effectiveness of existing policies and to create vital and accessible community open space with improved stormwater and flood management strategies; (2) increase the required setbacks and landscaping provisions from the existing creek top to improve stormwater detention capacity and to help address flooding issues and creek restoration; (3) prohibit general vehicle access along the creek within the Stream Development Ordinance overlay district.

Compliance with the regulatory provisions in the MS4 permit that limit runoff from new development and these General Plan goals, policies, and actions and would ensure that the implementation of the proposed project would not result in significant increases in runoff and would not contribute to the construction of new storm drain facilities or expansion of existing facilities that would cause significant

## UTILITIES AND SERVICE SYSTEMS

environmental impacts. In addition, the City would continue to repair, rehabilitate, and upgrade the storm drain system through implementation of the CIP program. Therefore, impacts with respect to stormwater infrastructure would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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UTIL-11	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to stormwater infrastructure.
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The analysis of cumulative storm drainage impacts considers future development within the five watersheds that encompass the EIR Study Area. Cumulative projects could result in an incremental increase in impervious surfaces that could increase stormwater runoff and impact existing storm drain facilities. However, all cumulative projects would be required to comply with City and County ordinances and General Plan goals, policies, and actions, as well as the MS4 permit, which would minimize stormwater runoff.

Development within the EIR Study Area would require conformance with State and City policies that would reduce hydrology and infrastructure construction impacts to less than significant levels. Any new development in the city would be subject to the General Plan Reset goals, policies, and actions listed in impact discussion UTIL-10 and City ordinances, design guidelines, zoning codes, and other applicable City requirements that reduce impacts related to hydrology and stormwater drainage facilities. More specifically, potential changes related to stormwater flows, drainage, impervious surfaces, and flooding would be minimized by the implementation of stormwater control measures, retention, infiltration, and low-impact-development measures and review by the City's Public Works Department to integrate measures to reduce potential stormwater drainage and flooding impacts.

All cumulative projects in unincorporated County land within the watershed areas would be subject to similar permit requirements and would be required to comply with various municipal codes and policies and County ordinances, as well as numerous water quality regulations that control construction-related and operational discharge of pollutants in stormwater. The water quality regulations implemented by the San Francisco Bay RWQCB take a basinwide approach and consider water quality impairment in a regional context. For example, the NPDES Construction Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the MS4 Permit also applies to San Mateo County to manage stormwater systems and be collectively protective of water quality. For these reasons, impacts from future development within the EIR Study Area related to stormwater infrastructure construction are not cumulatively considerable.

In combination with past, present, and reasonably foreseeable projects, proposed development and redevelopment within the EIR Study Area would not result in a cumulatively considerable impact to stormwater infrastructure and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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### 4.17.5 ENERGY INFRASTRUCTURE

#### 4.17.5.1 ENVIRONMENTAL SETTING

This section provides a general description of the regulatory setting addressing existing electric, natural gas and telecommunications infrastructure, supply, and demand in the City of San Carlos. Chapter 4.5, *Energy*, of this Draft EIR analyzes the proposed project's potential impacts associated with energy usage. This section focuses on the infrastructure systems associated with electricity, natural gas, and telecommunication services.

#### Regulatory Framework

The federal and State regulatory framework for energy is described in detail in Chapter 4.5, *Energy*, of this Draft EIR. The regulatory requirements that pertain solely to energy infrastructure are repeated below.

##### *Federal Regulations*

##### National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

##### Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

##### Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act contains provisions designed to increase energy efficiency and the availability of renewable energy. The Act contains provisions for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliance equipment.

##### National Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety

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Administration within the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system. The regulations enacted under this act have been updated several times. The latest revision is dated May 2023 and includes additional safety regulations for gas transmission pipelines, including repair criteria, integrity management improvements, cathodic protection, and other inspection and maintenance procedures. The regulations are encoded in 49 Code of Federal Regulations, Part 192.

### *State Regulations*

#### Warren-Alquist Act

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest revision is dated January 2022.

#### California Public Utilities Commission Long Term Energy Efficiency Strategic Plan

Adopted in September 2008 and updated in January 2011, the California Public Utilities Commission (CPUC) Long Term Energy Efficiency Strategic Plan provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-, mid-, and long-term strategies to assist in achieving these goals. The plan sets forth the following four goals, known as "Big Bold Energy Efficiency Strategies," to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020.
- All new commercial construction in California will be zero net energy by 2030.
- Heating, ventilation, and air conditioning will be transformed to ensure that its energy performance is optimal for California's climate.
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

The CPUC and CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- Goal 1: New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- Goal 2: 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- Goal 3: Transform the commercial lighting market through technological advancement and innovative utility initiatives.

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### California Energy Code

The State of California provides a minimum standard for energy conservation through Title 24, Part 6 California Code of Regulations, commonly referred to as the California Energy Code. The California Energy Code was first adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977. The standards are updated on a three-year cycle to allow for consideration and possible incorporation of new energy efficiency technologies and methods. In August 2021, the CEC adopted the 2022 California Energy Code, which went into effect on January 1, 2023. The 2022 standards require mixed-fuel single-family homes to be electric ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic systems and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.<sup>83</sup>

The 2025 Building Energy Efficiency Standards were adopted in September 2024 and will become effective on January 1, 2026. The Building Energy and Efficiency Standards and CALGreen undergo a triennial update with a goal to achieve zero net energy for residential buildings by 2020 and nonresidential buildings by 2030.

### 2023 Integrated Energy Policy Report

The CEC published the 2023 Integrated Energy Policy Report to identify pathways to deeply decarbonize the state's electricity system in response to meeting the SB 100 goal of zero-carbon by 2045. The report provides an analysis of electricity sector trends, building decarbonization and energy efficient, zero-emission vehicles, energy equity, climate change adaptation, electricity reliability, natural gas assessment, and electricity, natural gas, and transportation energy demand forecasts. The aim is to leverage California's clean electricity system to decarbonize, or remove carbon from, other portions of the state's energy system. SB 1389 (Chapter 568, Statutes of 2002) requires the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery, distribution, electricity demand, and price to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety.

### California Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. CALGreen (24 California Code of Regulations, Part 11) 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 greenhouse gas (GHG) emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and

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<sup>83</sup> California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

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work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. The latest 2022 CALGreen code became effective on January 1, 2023.

The CALGreen code includes provisions 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, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, etc. 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.<sup>84</sup>

### Appliance Efficiency Regulations

California's Appliance Efficiency Regulations 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 (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.<sup>85</sup>

### California Energy Benchmarking and Disclosure

The Building Energy Benchmarking Program is mandated under AB 802 and requires owners of large commercial and multifamily buildings to report energy use to the CEC by June 1 annually. This program applies to all buildings with more than 50,000 square feet of gross floor area and owners of multifamily residential buildings with more than 50,000 square feet and 17 or more utility accounts. The bill requires each utility, upon the request and authorization of the owner, owner's agent, or operator of a building covered under the regulation, to deliver or provide aggregated energy usage data for a covered building. The required energy usage shall be reported to the CEC through the Energy Star Portfolio Manager.

### California Renewable Portfolio Standards

A major component of California's Renewable Energy Program is the renewables portfolio standard established under SB 1078 (Sher) and SB 107 (Simitian). The standard requires that a specified percentage of the electricity that utilities provide comes from renewable resources. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. SB 1020, signed into law on September 16, 2022, requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all

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<sup>84</sup> California Building Standards Commission, July 2022, *2022 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11*, <https://codes.iccsafe.org/content/CAGBC2022P1/copyright>, accessed October 22, 2024.

<sup>85</sup> California Energy Commission, 2017, *2016 Appliance Efficiency Regulations*, <https://pdf4pro.com/cdn/2016-appliance-efficiency-regulations-5104f7.pdf>, accessed October 22, 2024.

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State agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

### CPUC Natural Gas Regulations

The CPUC regulates natural gas utility rates and services as well as the transportation of natural gas over the extensive transmission and distribution pipeline systems. The CPUC also regulates gas storage facilities. The Gas Safety and Reliability Branch of the CPUC ensures that natural gas pipeline systems are designed, constructed, operated, and maintained according to the safety standards set by the CPUC and the federal government. The regulations are provided in the CPUC General Order No. 112-E and the Natural Gas Pipeline Safety Act of 2011.

### *Local Regulations*

#### San Carlos General Plan

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.5.3, *Impact Discussion*.

#### City of San Carlos Municipal Code

The SCMC is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to energy as follows:

- Chapter 15.04, *Technical Building Codes*, adopts the Title 24, Part 6, the California Energy Code (2022 Edition) and Title 24, Part 11, CALGreen. requiring all new building construction to have all electric utilities, with an exemption for non-residential buildings that contain a restaurant or commercial kitchen that is allowed to install gas-fueled cooking appliances, as granted by the Building Official. The proposed project would be all electric with the exception of gas cooking appliances for the restaurant.
- Chapter 15.16, *Streamlined Permitting Process for Small Residential Rooftop Solar Systems*, allows for an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 to achieve timely and cost-effective installations of small residential rooftop solar energy systems.
- Chapter 15.20, *Streamlined Permitting Process for Electric Vehicle Charging Stations*, promotes the use of electric vehicles by creating an expedited, streamlined permitting process for electric vehicle charging stations while promoting public health and safety on the installation and use of such charging stations.
- Chapter 18.24, *Wireless Telecommunications Facilities*, provides standards for the development of telecommunications facilities and the installation of antennas to protect the visual character of the



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city and protect its residents from the possible adverse health effects associated with electromagnetic exposure.

### Existing Conditions

#### *Electricity*

Two electricity providers, Pacific Gas and Electric Company (PG&E) and Peninsula Clean Energy (PCE) serve the EIR Study Area. The City also encourages the installation of local renewable resources, such as rooftop solar energy systems, which will reduce the cost of electricity for residents and businesses and enhance the local economy. The City is also pursuing policies and building code changes that would require new and existing buildings to be all-electric and eliminate natural gas as an energy source. By expanding on-site electricity generation and storage, San Carlos will not only reduce greenhouse gas emissions but also minimize the impact of grid failures and power disruptions.

#### Peninsula Clean Energy

PCE was launched by San Mateo County and all twenty of its cities, including San Carlos, to meet local climate action goals. PCE is the default electricity provider for all communities and cities in San Mateo County and offers two electricity options, each with a different percentage of sustainable energy.<sup>86</sup> Residents and businesses in San Carlos are automatically enrolled in PCE's ECOplus service, which is distributed to customers through PG&E's existing grid infrastructure. PCE also offers rebates of up to \$3,000 for heat pump water heaters, up to \$3,500 for heat pump heating, ventilation, and air conditioning (HVAC) systems, and no-cost electric appliance, energy efficiency upgrade, and home repairs to income-qualified residents of San Mateo County. Customers have the option to opt-out of PCE renewable energy sources and receive their energy service from PG&E. PG&E is responsible for maintaining transmission lines, handling customer billing, and responding to new service requests and emergencies within the PCE service area.

#### Pacific Gas and Electric Company

PG&E is a publicly traded utility company that generates, purchases, and transmits energy under contract with the CPUC. PG&E's service territory is 70,000 square miles, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada to the Pacific Ocean. PG&E's electricity distribution system consists of 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines with approximately 5.5 million electric customer accounts.<sup>87</sup>

The electricity is generated by a combination of sources such as natural gas-fired power plants, nuclear power plants, and hydro-electric dams as well as newer sources of energy such as wind turbines and

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<sup>86</sup> City of San Mateo, 2024, Peninsula Clean Energy. <https://www.cityofsanmateo.org/3261/Peninsula-Clean-Energy>, accessed on October 22, 2024.

<sup>87</sup> PG&E, 2024, Company Profile. <https://www.pge.com/en/about/company-information/company-profile.html>, accessed on October 22, 2024.

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photovoltaic plants, also known as solar farms. The electric grid is a network of high-voltage transmission lines that link power plants with the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level and consists of overhead or underground distribution lines, transformers, and individual service “drops” that connect to the individual customer.

In 2022, approximately 38 percent of PG&E’s energy generated came from renewable resources including biopower, geothermal, small hydroelectric, solar, and wind power. PG&E’s portfolio consisted of 49 percent nuclear generation, 8 percent large hydroelectric facilities, and 5 percent natural gas.<sup>88</sup> PG&E also has 1,200 megawatts of battery storage capacity already connected to the electric grid and has contracts totaling more than 3,000 megawatts of capacity by 2025.<sup>89</sup>

PG&E’s projected average annual electricity demand growth (baseline-demand forecast) between 2023 and 2040 is approximately 2.0 percent. Total baseline-electricity consumption in PG&E’s service area was 107,394 gigawatt-hours per year in 2023 and is forecast to increase to 145,974 gigawatt-hours in 2040.<sup>90</sup> PG&E is expected to meet its electricity demands in 2040.

### *Natural Gas*

PG&E is also the natural gas service provider for the City of San Carlos. The natural gas system includes approximately 50,000 miles of natural gas pipelines, including 6,700 miles of transmission pipelines and 42,000 miles of distribution pipelines.<sup>91</sup> The transmission pipelines move natural gas from compressor stations and storage facilities to regulator stations. At the regulator station, the pressure in the pipeline is reduced before gas enters the distribution system, which consists of smaller diameter pipelines that deliver gas to residences and businesses. PG&E has approximately 4.5 million natural gas customer accounts.<sup>92</sup>

Natural gas demand statewide is projected to decline an average of 1.1 percent per year through 2035.<sup>93</sup> This is primarily due to the goal of reducing greenhouse gas emissions and the ordinances of some cities for new construction to be all electric. Gas demand is expected to decrease from 5,298 million cubic feet of gas per day in 2022 to 4,857 million cubic feet per day by 2035. California’s gas storage facilities

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<sup>88</sup> Pacific Gas & Electric Company, 2024, Clean Energy Solutions, <https://www.pge.com/en/about/corporate-responsibility-and-sustainability/taking-responsibility/clean-energy-solutions.html>, accessed October 22, 2024.

<sup>89</sup> Pacific Gas & Electric Company, 2024, Renewable Energy Storage, <https://www.pgecorp.com/assets/pgecorp/localized/en/sustainability/corporate-responsibility-sustainability/reports/2023/planet/clean-energy/renewable-energy-storage/>, accessed October 22, 2024.

<sup>90</sup> California Energy Commission, 2024, California Energy Demand Forecast, 2023-2040, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2023-integrated-energy-policy-report/2023-1>, accessed October 22, 2024.

<sup>91</sup> PG&E, 2024, PG&E Gas Systems. <https://www.pge.com/en/about/pge-systems/gas-systems.html#tabs-fc6b80548f-item-94036063d6-tab>, accessed October 22, 2024.

<sup>92</sup> Pacific Gas and Electric Company, 2024, Company profile <https://www.pge.com/en/about/company-information/company-profile.html>, accessed October 22, 2024.

<sup>93</sup> California Public Utilities Commission, 2022, 2022 California Gas Report, [https://www.socalgas.com/sites/default/files/Joint\\_Utility\\_Biennial\\_Comprehensive\\_California\\_Gas\\_Report\\_2022.pdf](https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf), accessed October 22, 2024.

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supplement pipeline gas supply during high demand periods and also provide supply reliability. The supplies of natural gas would meet the demand through year 2035.<sup>94</sup>

### *Telecommunications and Internet Providers*

Telecommunications services include wireless internet, cell phone and land line telephone, cable television, and satellite television. There are numerous telecommunication and internet providers that serve the EIR Study Area. Telecommunication providers include AT&T, T-Mobile, Verizon, and others. Internet providers include Spectrum, Xfinity, AT&T, T-Mobile, Earthlink, and others. Multiple choices give San Carlos residents and businesses a variety of options when choosing telecommunication providers.

The wireless networks consist of fiber-optic cables that connect major internet hubs over long distances. In San Mateo County, these cables typically run north to south throughout the County. The networks can be expanded by using small cell facilities, which are small antennae placed on existing utility poles or streetlights along with small pole-mounted radios and other accessory equipment. In this manner, the fiber-optic network can be easily expanded to meet the demand for wireless services. The current infrastructure is in place and sufficient to serve existing and future customers in San Carlos and the surrounding area.

The City will continue to require franchises to underground utility service connections for new development and underground existing overhead lines, when justifiable. The City will also continue to work with PG&E and other utility providers to underground new and existing overhead infrastructure as opportunities and funding permit.

### **4.17.5.2 STANDARDS OF SIGNIFICANCE**

Implementation of the proposed project would result in significant impacts related to energy infrastructure if it would:

- UTIL-12      Require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- UTIL-13      In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to electric power, natural gas, or telecommunications facilities.

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<sup>94</sup> California Public Utilities Commission, 2022, 2022 California Gas Report.  
[https://www.socalgas.com/sites/default/files/Joint\\_Utility\\_Biennial\\_Comprehensive\\_California\\_Gas\\_Report\\_2022.pdf](https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf),  
accessed October 22, 2024.

## UTILITIES AND SERVICE SYSTEMS

### 4.17.5.3 IMPACT DISCUSSION

UTIL-12	Implementation of the proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
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Electrical service to the EIR Study Area would be provided by PCE and PG&E through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 4.17-12, *Year 2045 Forecast Electricity Consumption*, electricity use in the EIR Study Area would increase by 93,696,832 kilowatt-hours per year. However, the per person electricity use would decrease by 526 kWh per year, which reflects the replacement of existing building stock with new development that meets the California Building Energy Efficiency Standards and CALGreen standards.

**TABLE 4.17-12 YEAR 2045 FORECAST ELECTRICITY CONSUMPTION**

Land Use	Electricity Usage (kWh/year) <sup>a</sup>		
	Existing Conditions	Proposed Project	Net Change
Nonresidential	108,796,274	162,826,388	54,030,114
Residential	66,307,811	105,974,529	39,666,718
<b>Total</b>	<b>175,104,085</b>	<b>268,800,917</b>	<b>93,696,832</b>
Service Population	51,610	93,770	42,160
Per Service Population Annual Consumption	3,393	2,867	-526

Note:

a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

As shown in Table 4.17-13, *Year 2045 Forecast Natural Gas Consumption*, natural gas use with the proposed project would increase in the EIR Study Area by 4,662,431 therms annually, or approximately 57 percent, from existing conditions. The per service population natural gas consumption is estimated to slightly decrease from 159 therms per person per year in 2024 to 137 therms per person per year in 2045. This is conservative as many projects in the city would be subject to the SCMC code's all-electric requirements.

**TABLE 4.17-13 YEAR 2045 FORECAST NATURAL GAS CONSUMPTION**

Land Use	Natural Gas Usage (Therms per year) <sup>a</sup>		
	Existing Conditions	Proposed Project	Net Change
Nonresidential	2,527,969	3,783,403	1,255,433
Residential	5,695,217	9,102,215	3,406,998
<b>Total</b>	<b>8,223,187</b>	<b>12,885,618</b>	<b>4,662,431</b>
Service Population	51,610	93,770	42,160
Per Service Population Annual Consumption	159	137	-22

Note: Totals may not add up due to rounding.

a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

Source: See Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR

## UTILITIES AND SERVICE SYSTEMS

These energy consumption rates are modest increases when considered in the context of PCE's and PG&E's service territories. The increase in electricity usage for the EIR Study Area is approximately 0.2 percent of PG&E's projected energy supply in 2040, and the increase in natural gas consumption for the EIR Study Area is less than 0.01 percent of PG&E's natural gas supply in 2035.<sup>95</sup> PG&E also states that there would be sufficient natural gas supplies to cover its service area in 2035 and electrical supplies to cover its service area in 2040.

In addition, future development would be required to comply with the current and future updates to the California Energy Code and the CALGreen Code, which would contribute to reducing energy demands. New buildings would also use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations, which would ensure the use of efficient electricity and natural gas consumption. New and replacement buildings in compliance with these standards would generally have greater energy efficiency than existing buildings. Also, San Carlos is in the process of requiring all-electric appliances for new development.

The Land Use (LU) Element, Environmental Management (EM) Element, and Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contain goals, policies, and actions that require local planning and development decisions to consider utilities and service systems, including energy efficiency and infrastructure impacts. The following General Plan goal, policies, and actions would serve to improve energy infrastructure:

- **Goal LU-5:** Support and maintain land uses that contribute to a vibrant and resilient local economy and support the fiscal well being of the City.
  - **Policy LU-5.11:** Continue to require developers to pay their fair share of the capital cost of public facilities through appropriate development impact and utility connection fees.
- **Goal LU-8:** Ensure excellence in all development design.
  - **Policy LU-8.17:** Require telecommunications and utility facilities to be sensitively placed, shielded, screened or lessened from view to the greatest extent possible through design review.
  - **Policy LU-8.18:** Encourage "green building" practices in new development and redevelopment, such as those that make a building more energy efficient and reduces its effect on human health and the environment through better siting, design, construction, maintenance and operation.
- **Goal EM-9:** Reduce energy consumed citywide.
  - **Policy EM-9.1:** Provide assistance and support efforts for increased energy efficiency for businesses and residences through a combination of incentives and regulations.
  - **Policy EM-9.2:** Support on-site generation of energy through alternative forms of energy production such as solar panels, wind turbines and biomass facilities.
  - **Policy EM-9.5:** Design all new construction and major remodels of government agency buildings to relevant green building standards.

<sup>95</sup> PG&E's projected energy supplies for electricity do not extend beyond 2040 and for natural gas do not extend beyond 2035.

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- **Policy EM-9.6:** Encourage new private construction and major remodels to be designed to meet or exceed Green Uniform Building Code requirements.
- **Policy EM-9.7:** Implement energy efficiency in City-owned and -operated facilities to reduce municipal energy costs and serve as a model for the community.
- **Goal ESPS-3:** Agency Coordination: A resilient San Carlos is well prepared to minimize risks associated with wildfire.
  - **Action ESPS-3.25:** Identify the potential for street widening and improvement during regular Capital Improvement project maintenance, e.g., emergency access, utility undergrounding, resurfacing, and American with Disabilities (ADA) compliance.
- **Goal ESPS-10:** A community that is resilient during and after extreme heat and severe weather events.
  - **Policy ESPS-10.4:** Improve utility and transportation infrastructure, if needed, to ensure functionality during and following extreme heat and severe weather events, which may bring extreme precipitation and flooding
- **Goal ESPS-13:** Ensure adequate public services and high-quality design of public facilities to make San Carlos a safe, enjoyable, and quality community in which to live, work and shop.
  - **Policy ESPS-13.10:** Require existing overhead utility lines be placed underground in new development and redevelopment through a phased program of conversion in existing overhead areas.

Compliance with federal, State, and local regulations (e.g., Building Energy Efficiency Standards, CALGreen, and Renewables Portfolio Standards) would increase building energy efficiency and reduce building energy demands. Additionally, the General Plan goals, policies, and actions listed above will contribute to minimizing building-related energy demands and demands on nonrenewable sources of energy. Implementation of the General Plan goal, policies, and actions in conjunction with and complementary to regulatory requirements, would ensure that energy demand associated with growth under the proposed project would not be inefficient, wasteful, or unnecessary, therefore avoiding the need for new or expanded electric power and natural gas facilities. In addition, the energy providers and telecommunications providers that serve the EIR Study Area indicate that they have the capability to serve future increases in population within their service areas without significant changes to the existing infrastructure. Therefore, implementation of the proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## UTILITIES AND SERVICE SYSTEMS

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UTIL-13	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulatively considerable impact to electric power, natural gas, or telecommunications facilities.
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The area considered for cumulative impacts are the service areas of PCE and PG&E for electricity and PG&E for natural gas. Other projects within the service areas would increase electricity and natural gas demands.

The CPUC has identified the Integrated Energy Policy Report as “the appropriate venue for considering issues of load forecasting, resource assessment, and scenario analyses, to determine the appropriate level and ranges of resource needs for load serving entities in California.” The Integrated Energy Policy Report shows that California’s electricity sector is leading efforts to reduce GHG emissions and there has been an increase in electricity consumption of only 10 percent while California’s economy grew by 54 percent between 2000 and 2018.<sup>96</sup> Natural gas consumption is expected to level out between 2020 and 2030 with no significant increase due to energy savings from new building standards and the implementation of city and county ordinances that require new construction to have all-electric appliances and heating.

In addition, all future projects developed within the PCE and PG&E service areas would implement the requirements of the California Energy Code and CALGreen Building Code. New buildings would also use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations. Counties and cities review project design plans against these codes and ensure compliance before issuing construction permits. These measures would reduce the overall consumption of electricity and natural gas.

The energy providers and telecommunications providers that serve the EIR Study Area indicate that they have the capability to serve future increases in population within their service areas without significant changes to the existing infrastructure. In addition, the proposed 2045 General Plan Reset includes goals, policies, and actions that would contribute to minimizing inefficient, wasteful, or unnecessary energy consumption and ensure compliance with State, regional, or local plans for renewable energy, therefore avoiding the need for new or expanded electric power and natural gas facilities. Therefore, the proposed project would not result in a cumulatively considerable impact to electric power, natural gas, or telecommunication facilities and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<sup>96</sup> California Energy Commission, 2020. Adopted 2019 Integrated Energy Policy Report.

## UTILITIES AND SERVICE SYSTEMS

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## 4.18 WILDFIRE

This chapter of the Draft Environmental Impact Report (EIR) describes the regulatory framework and existing conditions of the City of San Carlos related to wildfire, and the potential impacts of the project from adopting and implementing the proposed 2045 General Plan Reset, and from future development and activities that would occur within the buildout horizon of the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.18.1 ENVIRONMENTAL SETTING

#### 4.18.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

###### *National Cohesive Wildfire Management Strategy*

In the Federal Land Assistance, Management, and Enhancement Act of 2009 (FLAME Act), Congress mandated the development of a National Cohesive Wildland Fire Management Strategy for all lands in the United States. Wildfire management is guided by the National Cohesive Wildland Fire Management Strategy, which has three primary goals—resilient landscapes, fire adapted communities, and safe and effective wildfire response.<sup>1</sup> These three goals enable land managers to manage vegetation and fuels; protect homes, communities, and other values at risk; manage human-caused ignitions; and effectively and efficiently respond to wildfires. California is part of the Western Regional Strategy Committee, chartered to support and facilitate the implementation of the National Cohesive Wildland Fire Strategy.

###### *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 for fire protection that are referenced in the California Fire Code (CFC). Specific standards applicable to wildfire 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

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<sup>1</sup> United States Department of the Interior and United States Department of Agriculture, 2014, *The National Strategy: The Final Phase of Development of the National Cohesive Wildland Fire Management Strategy*, <https://www.forestsandangelands.gov/documents/strategy/strategy/CSPHaseIIINationalStrategyApr2014.pdf>, accessed October 4, 2024.

## WILDFIRE

### State Regulations

#### *California Department of Forestry and Fire Protection*

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of California's privately-owned wildlands. CAL FIRE provides fire assessment and firefighting services for land in State Responsibility Areas (SRA), responds to an average of 550,000 emergencies each year, conducts educational and training programs, provides fire planning guidance and mapping, and reviews general plan safety elements to ensure compliance with State fire safety requirements. CAL FIRE staff, or a designee, also reviews building permit applications, parcel maps, and use permits for construction or development in SRAs and Local Responsibility Areas.

The Board of Forestry and Fire Protection is a government-appointed approval body within CAL FIRE. It is responsible for developing the general forest policy of the State, determining the guidance policies of CAL FIRE, and representing the State's interest in federal forestland in California. The Board of Forestry and Fire Protection also promulgates regulations and approves general plan safety elements that are adopted by local governments for compliance with State statutes.

The California Office of the State Fire Marshal supports the mission of CAL FIRE by focusing on fire prevention. These responsibilities include regulating buildings in which people live, congregate, or are confined; controlling substances and products that may, in and of themselves or by their misuse, cause injuries, death, and destruction by fire; providing statewide direction for fire prevention within wildland areas; regulating hazardous liquid pipelines; developing and renewing regulations and building standards; and providing training and education in fire protection methods and responsibilities. These are accomplished through major programs, including engineering, education, enforcement, and support from the Board of Forestry and Fire Protection. For jurisdictions in SRAs or very high fire hazard severity zones (FHSZs), the Land Use Planning Program division of the Office of State Fire Marshal reviews safety elements during the update process to ensure consistency with California Government Code, Section 65302(g)(3).

Together, the Board of Forestry and Fire Protection, Office of State Fire Marshal, and CAL FIRE protect and enhance the forest resources of all wildland areas of California that are not under federal jurisdiction.

#### *Fire Hazard Severity Zones and Responsibility Areas*

CAL FIRE designates FHSZs as authorized under California Government Code Sections 51175 et seq. FHSZs may be designated Very High, High, or Moderate. CAL FIRE considers many factors when designating FHSZs, including fire history, existing and potential vegetation fuel, flame length, blowing embers, terrain, and weather patterns for the area. CAL FIRE designates FHSZs in two types of areas depending on which level of government is financially responsible for fire protection.

- **Local Responsibility Area.** Incorporated communities are financially responsible for wildfire protection.
- **State Responsibility Area.** CAL FIRE and contracted counties are financially responsible for wildfire protection.

### *CAL FIRE Strategic Plan 2024: Transforming Tomorrow*

CAL FIRE developed the *CAL FIRE Strategic Plan 2024: Transforming Tomorrow* with goals and objectives to guide the vision and direction of CAL FIRE over the next five years.<sup>2</sup> The 2024 Strategic Plan focuses on a set of priorities and measuring progress towards future strategies that will drive improvement of the department. Priorities include improving the core capabilities of the department, enhancing internal operations, ensuring health and safety, and building an engaged, motivated, and innovative workforce.

### *2021 California Wildfire and Forest Resilience Action Plan*

The Governor’s Forest Management Task Force developed California’s Wildfire and Forest Resilience Action Plan, which is a framework for establishing healthy and resilient forests that can withstand and adapt to wildfire, drought, and climate change. This plan accelerates efforts to restore the health and resilience of California’s forests, grasslands, and natural places; improves the fire safety of communities; and sustains the economic vitality of rural forested areas. CAL FIRE, in partnership with the United States Forest Service, intends to scale up forest thinning and prescribed fire; integrate climate adaptation into the statewide network of regional forest and community fire resilience plans; improve the electricity grid resilience, and promote sustainable land use.

### *State Responsibility Area and Very High Fire Hazard Severity Zone Fire Safe Regulations*

California Code of Regulations (CCR) Title 14, Division 1.5, Chapter 7, Subchapter 2, *SRA/Very High FHSZ Fire Safe Regulations*, establishes minimum wildfire protection standards for construction and development in the SRA and Very High FHSZ and requires CAL FIRE to review development proposals and enact recommendations that serve as conditions of approval in these zones. These standards include basic emergency access and perimeter wildfire protection measures; signing and building numbering; private water supply resources for emergency fire use; and vegetation modification. These regulations apply to all residential, commercial, and industrial buildings in the SRA and Very High FHSZs, the siting of new mobile homes, all tentative and parcel maps, and applications for building permits approved before 1991 where these standards were not proposed. Fire Safe Regulations also include a minimum setback of 30 feet for all buildings from property lines and/or the center of a road. Section 1273.08, *Dead-End Roads*, of these standards provide regulations for the maximum lengths of single access roadways requiring the following:

- Parcels zoned for less than one acre: 800 feet
- Parcels zoned for 1 acre to 4.99 acres: 1,320 feet
- Parcels zoned for 5 acres to 19.99 acres: 2,640 feet
- Parcels zoned for 20 acres or larger: 5,280 feet

Fire Safe Regulations, Section 1299.03, *Fire Hazard Reduction Around Buildings and Structure Requirements*, provides defensible space requirements for areas within 30 feet of a structure (Zone 1) and between 30 and 100 feet from a structure (Zone 2). In Zone 1, all dead and dying plants must be

<sup>2</sup> California Department of Forestry and Fire Protection (CAL FIRE). 2024. *CAL FIRE Strategic Plan 2024: Transforming Tomorrow*. <https://www.fire.ca.gov/about/cal-fire-strategic-plan-2024>, accessed October 4, 2024.

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removed, as must any flammable vegetation that could catch fire. In Zone 2, horizontal and vertical spacing among shrubs and trees must be created and maintained.

### *Public Resources Code Section 4291*

Public Resources Code (PRC) Section 4291, *Mountainous, Forest-, Brush- and Grass-Covered Lands*, is intended for any person who owns, lease, controls, operates, or maintains a building or structure in a mountainous area, forest-covered lands, shrub-covered lands, grass-covered lands, or land that is covered with flammable material, regardless of whether the property is in an SRA or Very High FHSZ. This section requires defensible space to be maintained within 100 feet from each side of a structure. An ember-resistant zone is also required within 5 feet of a structure and more intense fuel reduction between 5 and 30 feet of a structure.

### *California Building Standards Code*

The California Buildings Standards Code (CBSC) (California Code of Regulations Title 24) provides 12 different codes for construction and buildings in California. This code is updated every three years, with the most recent version effective January 1, 2023.

### Building Design Standards

The California Building Code (CBC), Part 2 of CCR Title 24, identifies building design standards, including those for fire safety. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. Buildings are plan checked by local city building officials for compliance with the CBC and any applicable local edits. Typical fire safety requirements of the CBC include the installation of sprinklers in buildings and other facilities; the establishment of fire-resistance standards for fire doors, building materials, and particular types of construction in high or very high FHSZs; requirements for smoke-detection systems; exiting requirements; and the clearance of debris.

### Materials and Methods for Exterior Wildfire Exposure

Chapter 7A of the CBC, *Materials and Methods for Exterior Wildfire Exposure*, prescribes building materials and construction methods for new buildings in a FHSZ or Wildland Urban Interface. Chapter 7A contains requirements for roofing; attic ventilation; exterior walls; exterior windows and glazing; exterior doors; decking; protection of underfloor, appendages, and floor projections; and ancillary structures. Other requirements include vegetation management compliance, as prescribed in CFC Section 4906 and PRC Section 4291.

### *California Fire Code*

The California Fire Code (CFC) incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official fire code for the State and all political subdivisions. It is found in 24 CCR Part 9 and, like the CBC, is revised and published every three years by the California Building Standards Commission. Also like the CBC, the CFC is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions. The CFC is a model

code that regulates minimum fire safety regulations for new and existing buildings; facilities; storage; processes, including emergency planning and preparedness; fire service features; fire protection systems; hazardous materials; fire flow requirements; and fire hydrant locations and distribution. Typical fire safety requirements include installation of sprinklers in all buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

### Fire Safety During Construction and Demolition

Chapter 33 of the CFC, *Fire Safety During Construction and Demolition*, provides requirements for fire safety precautions during construction and demolition of a development project. The purpose of this chapter is to provide reasonable safety to life and property from fire during construction and demolition operations, including those in underground locations. Specific requirements include a prohibition of smoking on-site, except for in approved areas; management of combustible materials and debris; cutting and welding; electrical wiring; and cooking. Additional requirements include the preparation of site safety plans prior to building permit issuance, providing fire watch during nonworking hours, and maintaining water supply for fire protection as soon as combustible materials arrive on a project site.

### Wildland-Urban Interface Areas

Chapter 49, *Requirements for Wildland Urban Interface Fire Areas*, of the CFC applies to any geographical area identified as a FHSZ by CAL FIRE. It defines FHSZs, connects to the SRA/Very High FHSZ Fire Safe Regulation requirements for defensible space, and parallels requirements for wildfire protection building construction and hazardous vegetation fuel management in other sections of the CCR and the PRC. Chapter 49 of the 2022 CFC includes a definition for the wildland-urban interface (WUI) and provides requirements for fire protection plans, landslide plans, long-term vegetation management, and creation and maintenance of defensible space for all new development within the WUI.

### *California Public Utilities Commission*

In 2007, wildfires in southern California were ignited by overhead utility power lines and aerial communication facilities near power lines. In response, the California Public Utilities Commission (CPUC) began considering and adopting regulations to protect the public from fire hazards due to overhead power lines and nearby aerial communication facilities. The CPUC published a Fire Threat Map under Rulemaking 15-05-006 following procedures in Decision 17-01-009, revised by Decision 17-06-024, which adopted a work plan for the development of a utility High Fire Threat District where enhanced fire safety regulations in Decision 17-12-024 apply.<sup>3</sup> The fire regulations require electric utilities to:<sup>4</sup>

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<sup>3</sup> California Public Utilities Commission, 2024, Decision Amending the Work Plan for The Development of Fire Map 2. <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M191/K628/191628745.pdf>, accessed October 4, 2024.

<sup>4</sup> California Public Utilities Commission, 2017, "CPUC Adopts New Fire-Safety Regulations." Press Release. <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K352/201352402.PDF>, accessed October 4, 2024.

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- Prioritize the correction of safety hazards.
- Correct nonimmediate fire risks in “Tier 2” (elevated fire threat) areas on the CPUC High Fire-Threat District within 12 months, and in “Tier 3” (extreme fire threat) areas within 6 months.
- Maintain increased clearances between vegetation and power lines within the High Fire Threat District.
- Maintain stricter wire-to-wire clearances for new and reconstructed facilities in Tier 3 areas.
- Conduct annual inspections of overhead distribution facilities in rural areas of Tier 2 and Tier 3 areas.
- Prepare a fire prevention plan annually if overhead facilities exist in the High Fire Threat District.

### *California Environmental Quality Act*

In November 2022, the California Attorney General issued the “Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act.” This guidance document was designed to help lead agencies comply with the California Quality Environmental Protection Act (CEQA) when considering whether to approve projects in wildfire-prone areas. These areas are often in the WUI area—i.e., the area where the built environment meets or intermingles with the natural environment. This guidance provides suggestions for how best to comply with CEQA when analyzing and mitigating a proposed project’s impacts on wildfire ignition risk, emergency access, and evacuation. The guidance is aimed at proposed development projects such as residential, industrial, or commercial developments. The extent to which it applies will vary by project based on project design and location. It does not impose additional requirements on local governments or alter any applicable laws or regulations but is intended to provide guidance on some of the issues, alternatives, and mitigation measures that should be considered during the environmental review process.

## Regional Regulations

### *San Mateo–Santa Cruz Unit Strategic Fire Plan*

CAL FIRE developed the San Mateo–Santa Cruz Unit 2023 Strategic Fire Plan, adopted in 2023, which covers an approximately 894-square-mile area and protects 572,160 acres of the SRA in both San Mateo and Santa Cruz Counties.<sup>5</sup> The goal of this plan is to outline resource needs in the area by creating a list of all the initial attack resources in the unit and expanding these resources in at-risk communities. There is also an education section in the plan that encourages teaching the community at formal events and meetings.

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<sup>5</sup> California Department of Forestry and Fire Protection, updated May 2023, *San Mateo–Santa Cruz Unit: 2023 Strategic Fire Plan*, <https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/osfm-website/what-we-do/community-wildfire-preparedness-and-mitigation/fire-plan/2023/2023-san-mateo-santa-cruz-unit-fire-plan.pdf?rev=f89a0764ea194b9fa9d26351c16d0f83&hash=1326CA209869D0FC23AE079668D6D146>, accessed October 4, 2024.

### *Santa Cruz San Mateo County Community Wildfire Protection Plan*

The Santa Cruz San Mateo County Community Wildfire Protection Plan identifies the risks created by wildfire across the landscape and provides strategies to mitigate wildfire risks and restore healthier, more resilient ecosystems and communities. The 2022 Santa Cruz San Mateo County Community Wildfire Protection Plan was developed through a collaborative effort with CAL FIRE's San Mateo and Santa Cruz Unit, the Resource Conservation District for San Mateo County and Santa Cruz County, the San Mateo Resource Conservation District, and the United States Fish and Wildlife Service. The primary strategy for fire prevention in this plan is reducing structural ignitability through construction methods and materials, education, and defensible space. Additional methods include fuel reduction projects, shaded fuel breaks, and closing the gap on data needs for future vegetation management programs.

### *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan*

The purpose of hazard mitigation planning is to reduce the loss of life and property by minimizing the impact of disasters. The *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan* (MJHMP), updated in 2021 in accordance with the federal Disaster Mitigation Action of 2000 (DMA 2000), provides an assessment of natural hazards in the county and a set of short-term mitigation actions to reduce or eliminate the long-term risk to people and property from these hazards. The San Carlos Jurisdictional Annex of the MJHMP provides an assessment of hazards and vulnerabilities, and a set of mitigation actions for San Carlos specifically while considering the results from the countywide effort. In the context of an MJHMP, mitigation is an action that reduces or eliminates long-term risk to people and property from hazards, wildfire.<sup>6</sup>

The MJHMP must be reviewed and approved by the Federal Emergency Management Agency (FEMA) every five years to maintain eligibility for disaster relief funding. As part of this process, the California Governor's Office of Emergency Services reviews all local hazard mitigation plans in accordance with DMA 2000 regulations and coordinates with local jurisdictions to ensure compliance with FEMA's Local Mitigation Plan Review Guide. As part of the proposed project, the MJHMP is adopted in its entirety into the proposed Safety Element by reference.

## Local Regulations

### *San Carlos General Plan*

As part of the proposed project, some existing General Plan goals, policies, and actions would be amended or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.18.3, *Impact Discussion*.

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<sup>6</sup> County of San Mateo, 2021, 2021 Multijurisdictional Local Hazard Mitigation Plan – Volume 2, <https://www.smcgov.org/media/53476/download?inline=,> accessed on October 11, 2024.

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### *City of San Carlos Municipal Code*

The San Carlos Municipal Code (SCMC) is the primary document that regulates the policies and practices of the City. The SCMC contains the Zoning Code, the Subdivision Ordinance, the Building and Construction Code, and other titles that are important in implementing the goals, policies, and actions of the General Plan. The SCMC includes various directives pertaining to wildfire as follows:

- Chapter 12.08, *Grading and Excavations*, provide minimum standards to protect property and control erosion and sedimentation to reduce surface runoff and related environmental damage caused by construction-related activities. This chapter includes regulations for the design, construction, quality of materials, use, location and maintenance of grading, excavating and fill, land disturbances, land fill and soil storage in connection with the clearing and grading of land for construction within the city.
- Chapter 13.12, *Underground Utility Districts*, allows the City Council to call public hearings to decide whether designated areas of the city require the removal of existing poles, overhead wires, and associated overhead structures related to utility lines. If approved, these areas become Underground Utility Districts, and the utility and property owners shall work together to underground existing utilities.
- Chapter 15.04, *Technical Building Codes*, adopts the CBC and CFC with local amendments.
  - Chapter 15.04.040, *Title 24, Part 2, California Building Code, Volumes 1 and 2, with appendices, amendments, and modifications*, adopts the 2022 CBC with amendments and is referred to as the City of San Carlos Building Code.
  - Chapter 15.04.110, *Title 24, Part 9, California Fire Code*, adopts the 2021 International Fire Code and the 2022 California Fire Code with amendments, referred to as the San Carlos Fire Ordinance.
- Chapter 15.56, *Flood Damage Prevention*, applies to all areas of special flood hazards within the City of San Carlos. This chapter contains requirements for construction, elevation, and floodproofing of buildings within special flood hazard areas identified by FEMA.
- Chapter 18.12, *Hillside (H) Overlay District*, applies to all lots and sites that have a footprint slope of 19.9 percent or greater. It is intended to protect residents by establishing regulations for managing the development of hillside areas. One of the purposes of the H District is to “Protect public health and safety by minimizing hazards, including soil erosion and fire danger associated with development on hillsides.”

### *San Carlos Climate Mitigation and Adaptation Plan*

The San Carlos Climate Mitigation and Adaptation Plan (CMAP), adopted in 2021, describes the hazards that may become more intense or occur more frequently due to climate change, including wildfire. The CMAP identifies strategies that support climate adaptation and resilience, including the following:

- **Strategy 40: Disaster Preparedness Information.** Provide disaster preparedness information to all residents and businesses in English, Spanish, Chinese, and other relevant languages.



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- **Strategy 41: Community Wildfire Protection Plan.** Develop a Community Wildfire Protection Plan, in coordination with San Mateo County Fire Department and CAL FIRE.
- **Strategy 42: Vegetation Management.** Promote vegetation management and fire-resistant landscape design on residential properties and businesses within the wildland-urban interface and very high fire severity zone.
- **Strategy 43: Fire Risk Reduction Assessment.** Develop a fire risk reduction assessment that can be used by project applicants and City staff in the development review process to identify and reduce or avoid potential harm through site design or other mitigation techniques within the very high or high fire severity zones.

### *San Carlos Emergency Operations Plan*

The City Council adopted the City of San Carlos Emergency Operations Plan (EOP) in March 2022. The EOP establishes the emergency management structure utilized for prevention, protection, response, and recovery of emergencies affecting San Carlos; the operational concepts and procedures associated with day-to-day field response to emergencies by City departments; and the policies and procedures for the San Carlos Emergency Center activities. The plan also identifies the policies, responsibilities, and procedures utilized to protect the health and safety of residents, public and private property, and the environmental effects of natural, technological, and man-made emergencies and disasters, as well as defines the procedures for a disaster recovery process.

## 4.18.1.2 EXISTING CONDITIONS

### Wildfire Background

According to PRC Sections 4103 and 4104, the term “wildfire” refers to any uncontrolled fire spreading through vegetative fuels that threatens to destroy life, property, or resources. In recent years, wildfires have been moving from traditionally wildland areas with natural vegetation into more urban areas, that is, the WUI, threatening homes, businesses, and essential infrastructure. Though wildfires play an important role in the ecology of many natural habitats, risks to human safety and property increase as urban development moves into areas susceptible to wildfire hazards.

### *Types of Wildfires*

There are three basic types of wildfires:

- **Crown fires** burn trees to their tops and are the most intense and dangerous wildland fires.
- **Surface fires** burn surface litter and duff and are known for being the easiest fires to extinguish and causing the least damage. Brush and small trees enable surface fires to reach treetops, and so are referred to as ladder fuels.

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- **Underground fires** occur underground in deep accumulations of dead vegetation. These fires move very slowly and can be difficult to extinguish due to limited access.<sup>7</sup>

Wildfires burn in many types of vegetation—forest, woodland, scrub, chaparral, and grassland. Many species of native California plants are adapted to fire, and habitats such as chaparral shrubs and woodlands can recover from fire. For example, some species of chaparral plants, such as ceanothus, require intense heat for germination and therefore have flammable resins on leaves and roots that can quickly sprout up in burned areas.<sup>8</sup> From 2020 to 2023, wildfires in California burned over 7.5 million acres of forest, grassland, desert, scrub and other vegetation types, in addition to development in the wildland-urban interface, with the greatest number of acres burned in 2020 and 2021.<sup>9</sup>

### *Wildfire Causes*

Although the term *wildfire* suggests natural origins, a 2017 study that evaluated 1.5 million wildfires in the United States between 1992 and 2012 found that humans were responsible for igniting 84 percent of wildfires, accounting for 44 percent of acreage burned.<sup>10</sup> The most common types of human-caused wildfires are burning of debris, equipment use and malfunction, negligently discarded cigarettes, and intentional acts of arson.<sup>11</sup> Power lines can also ignite wildfires through downed lines, vegetation contact, conductors that collide, and equipment failures.<sup>12</sup> Lightning is the most common cause of nature-induced wildfire.<sup>13</sup>

An analysis of United States Forest Service wildfire data from 1986 to 1996 determined that 95 percent of human-caused wildfires and 90 percent of all wildfires were within 0.5 mile of a road, and that about 61 percent of all wildfires and 55 percent of human-caused wildfires were within approximately 650 feet (200 meters) of a road. The study concluded that the increase in human-caused ignition greatly outweighs the benefits of increased access for firefighters.<sup>14</sup>

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<sup>7</sup> Western Fire Chief Association, 2024, “Understanding the Different Types of Wildfire,” <https://wfca.com/wildfire-articles/types-of-wildfire/#pp-toc-6x9tjk18rl5u-anchor-3>, accessed October 4, 2024.

<sup>8</sup> National Park Service, 2018, “Wildland Fire in Chaparral: California and Southwestern United States,” <https://www.nps.gov/articles/wildland-fire-in-chaparral.htm>, accessed October 4, 2024.

<sup>9</sup> CAL FIRE, Incidents by Year, <https://www.fire.ca.gov/incidents>, accessed October 4, 2024.

<sup>10</sup> Balch, Jennifer, et al., March 14, 2017, Human-Started Wildfires Expand the Fire Niche Across the United States, *Proceedings of the National Academy of Sciences* 114 No. 11, <https://www.pnas.org/content/pnas/114/11/2946.full.pdf>, accessed October 4, 2024.

<sup>11</sup> National Park Service, 2022, “Wildfire Causes and Evaluations,” <https://www.nps.gov/articles/wildfire-causes-and-evaluation.htm>, accessed October 4, 2024.

<sup>12</sup> Texas Wildfire Mitigation Project, 2018, How Do Power Lines Cause Wildfires? <https://wildfiremitigation.tees.tamug.edu/faqs/how-power-lines-cause-wildfires>, accessed October 4, 2024.

<sup>13</sup> Balch, Jennifer, et al. 2017, Human-Started Wildfires Expand the Fire Niche Across the United States. *Proceedings of the National Academy of Sciences* 114 No. 11. <https://www.pnas.org/content/pnas/114/11/2946.full.pdf>, accessed October 4, 2024.

<sup>14</sup> Pacific Biodiversity Institute, 2007, Roads and Wildfires, [http://www.pacificbio.org/publications/wildfire\\_studies/Roads\\_And\\_Wildfires\\_2007.pdf](http://www.pacificbio.org/publications/wildfire_studies/Roads_And_Wildfires_2007.pdf), accessed October 4, 2024.

## WILDFIRE

There are three primary methods of wildfire spread:

- **Embers.** Embers are the most prolific cause of home ignition, at a rate of two out of every three homes destroyed. Embers are glowing or burning pieces of vegetation or construction debris that are lofted during a wildfire and can move up to a mile ahead of a wildfire, especially during high winds. These small embers or sparks may fall on the vegetation near a home (on dry leaves, needles, or twigs on the roof) and subsequently ignite the home. Embers can travel several miles during high wind events, such as the Santa Ana Winds, posing a potential risk to all structures without fire-resistant landscaping and construction within a mile of the fire.<sup>15</sup>
- **Direct Flame Contact.** Direct flame contact refers to the transfer of heat by direct flame exposure. Direct contact will heat the building materials of the home, and if the time and intensity of exposure is severe enough, windows will break, and materials will ignite.
- **Radiant Heat.** A house can catch fire from the heat that is transferred to it from nearby burning objects, even in the absence of direct flames or embers. By creating defensible space around homes, the risk from radiant heat is significantly reduced.

### *Secondary Effects of Wildfires*

After a high intensity wildfire is suppressed, the burn scar is typically bare of its vegetative cover, which had supported the hillsides and steeper slopes. As a result, rainstorms increase the possibility of severe landslides and debris flow in these areas. The intense heat from the fire can also cause a chemical reaction in the soil that makes it less porous, causing water to run off during precipitation events, which can lead to flooding downstream.

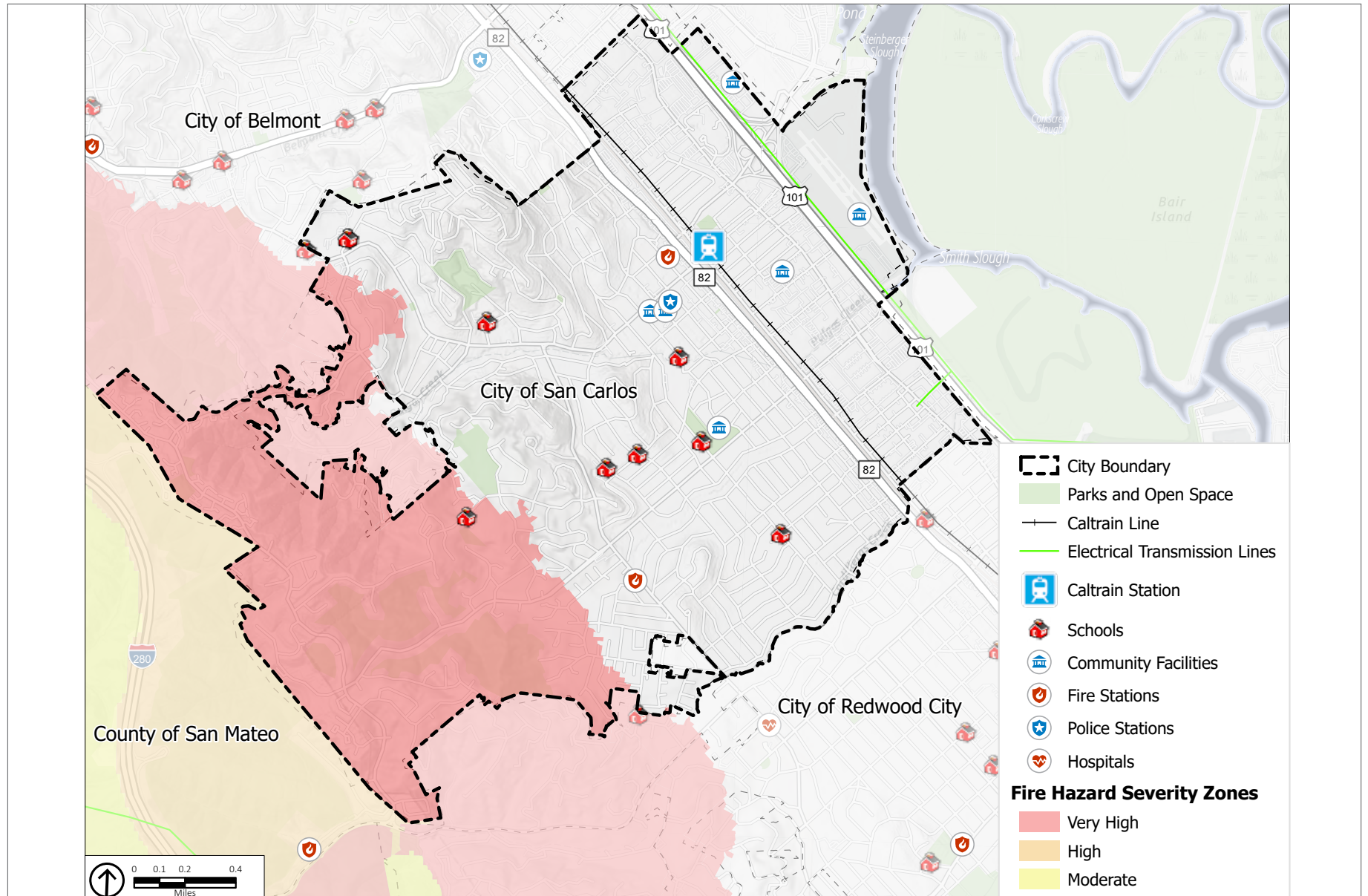
In addition to damaging natural environments, wildfires can injure and cause fatalities of residents and firefighters as well as damage or destroy structures and personal property. Wildfires also deplete water reserves, down power lines, disrupt communication services, and block evacuation routes, which can isolate neighborhoods. Wildfires can also indirectly cause flooding if flood control facilities become inadequate to handle increases in stormwater runoff, sediment, and debris that are likely to be generated from burn scars. Regionally, smoke from wildfires creates poor air quality that can last for days or weeks, depending on the scale of the wildfire and wind patterns.

## Wildfire in San Carlos

The geography, weather patterns, and vegetation in the City of San Carlos and surrounding areas provide ideal conditions for wildfires. As shown in Figure 4.18-1, *Very High Fire Hazard Severity Zones*, very high FHSZs are in the western portions of the city, which also coincide with the hillside and landslide-prone areas of the city.

<sup>15</sup> CAL FIRE, 2019, Wildland Urban Interface, [https://frap.fire.ca.gov/media/10300/wui\\_19\\_ada.pdf](https://frap.fire.ca.gov/media/10300/wui_19_ada.pdf), accessed October 4, 2024.

## WILDFIRE

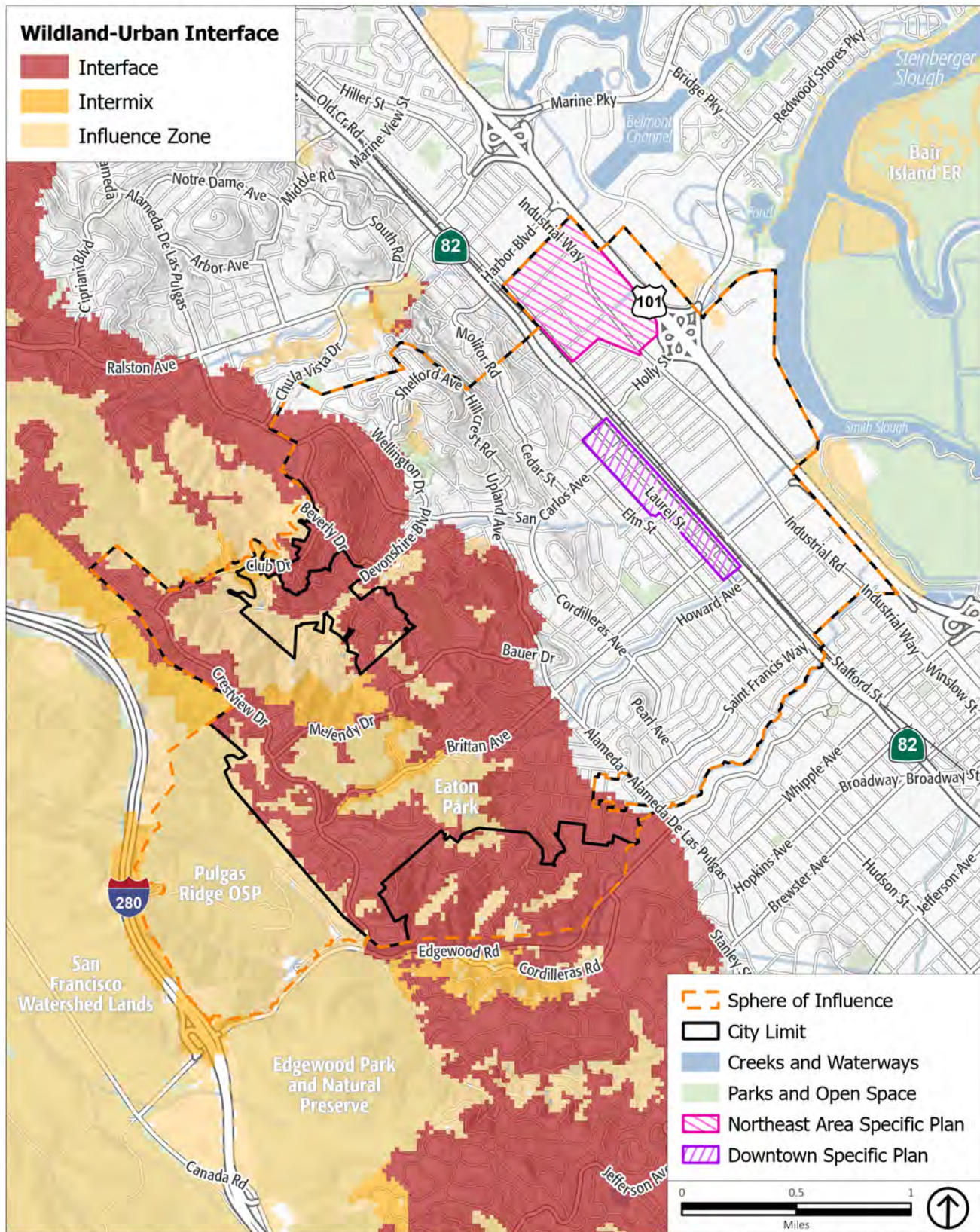


Source: California Board of Forestry and Fire Protection, 2007.

Figure 4.18-1  
Very High Fire Hazard Severity Zones



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Source: California Department of Forestry and Fire Protection, 2024; City of San Carlos, 2024; PlaceWorks, 2024.

Figure 4.18-2  
Wildland-Urban Interface

## WILDFIRE

Wind is a major weather factor of wildfire behavior. Average wind speeds in San Carlos vary only slightly throughout the year, with the windier part of the year from February to July with average wind speeds of 8.8 miles per hour, and the calmer part of the year from August to January with average wind speeds of 7.5 miles per hour.<sup>16</sup> Wind is most commonly from the west from February to November, with winds from the north from November to February.<sup>17</sup>

Diablo winds, which are a type of downslope, warm, northerly to northeasterly wind, flow over the Diablo Mountain range and have had reported speeds of up to 100 miles per hour.<sup>18</sup> As wind speeds increase, the rate of fire spread, intensity, and ember spread potential also increases. Gusty and erratic wind conditions can cause a wildfire to spread irregularly, making it difficult to predict its path and effectively deploy fire suppression forces. Winds from the northeast in the late summer and fall compound with lower relative humidity, creating “red flag” conditions.<sup>19</sup> Diablo winds and low humidity are especially dangerous because low humidity can dry out trees and other fuel that may also be weakened by the winds. This can increase wildfire conditions in the city. Wind shifts can also occur suddenly due to temperature changes and interactions with steep slopes or hillsides, causing fires to spread unpredictably. Fall has historically been one of the most dangerous times for wildfire risk, as periods of very high temperatures, low humidity, and strong wind increase, causing “red flag” warnings and extreme fire danger.

### Fuel

The qualities of vegetation that directly influence fire risk include fuel type and size, loading, arrangement, chemical composition, and dead and live fuel moisture, which contributes to the flammability characteristics of the vegetation. As discussed in Chapter 4.3, *Biological Resources*, of the Draft EIR, San Carlos has seven different natural communities, including sparsely vegetated areas, aquatic habitat, wetlands, riparian habitats, oak woodlands, annual grasslands, and scrub. The oak woodland, annual grassland, and scrub habitats are in the western upland and park areas of the city. Grasslands, woodlands, and scrublands are highly flammable, particularly leaf litter that is left to accumulate, ultimately dries, and provides fuel for potential fires.

### Topography

Slope is a measure of land steepness, and wildfire intensity and rate of spread increase as slope increases due to the tendency of heat from a fire to rise via convection. For example, as slope increases from 20 to 40 percent, flame heights can double, and rates of fire spread can increase fourfold; from 40 to 60 percent, flame can become three times higher, and rates of spread can increase eightfold. The arrangement of vegetation throughout a hillside can also contribute to increased fire activity on slopes.

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<sup>16</sup> Weatherspark, “Climate and Average Weather Year Round in San Carlos,” accessed October 8, 2024, <https://weatherspark.com/y/556/Average-Weather-in-San-Carlos-California-United-States-Year-Round>.

<sup>17</sup> Weatherspark, “Climate and Average Weather Year Round in San Carlos,” accessed October 8, 2024, <https://weatherspark.com/y/556/Average-Weather-in-San-Carlos-California-United-States-Year-Round>.

<sup>18</sup> Liu, YC., P. Di, S. H. Chen, et al., November 28, 2020, *Climatology of diablo winds in Northern California and their relationships with large-scale climate variabilities*, accessed June 16, 2023, <https://doi.org/10.1007/s00382-020-05535-5>.

<sup>19</sup> The National Weather Service issues “red flag” weather day warnings when certain weather elements such as low relative humidity and strong winds could lead to increased wildfire risk.

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As described in Chapter 4.6, *Geology and Soils*, of the Draft EIR, topography of the EIR Study Area includes moderate to steep slopes in the western neighborhoods and open space areas, sloping down to the eastern portion of the EIR Study Area near the San Francisco Bay.

### Human actions

Most wildfires are ignited by human action, the result of direct acts of arson, carelessness, or accidents. Many fires originate in populated areas along roads and around homes and are often the result of careless disposal of cigarettes, mowing of dead grass, electrical equipment malfunction, use of equipment, or burning of debris. Recreation areas with increased human activity that are in fire-prone areas also increase the potential for wildfires.

### Climate Change

Climate change is likely to increase annual average temperatures in San Carlos from a historical 69.9 degrees Fahrenheit (°F), to 74.1°F by 2050 and 77.3°F by 2100.<sup>20</sup> This will likely create warmer temperatures earlier and later in the year. Precipitation levels are projected to vary over the course of the century, changing from a historical annual average of 20.7 inches per year, to an annual average of 23.2 inches by 2050 and an annual average of 25.6 inches by 2099.<sup>21</sup> Variations in precipitation patterns will also lead to an increase in frequency and intensity of heavy precipitation events as well as prolonged periods of drought. The combination of extreme heat and droughts can cause soils and vegetation to dry out, creating more fuel for wildfires. These factors are expected to increase wildfire conditions, creating a risk of more frequent and intense wildfires. Because wildfires burn the trees and other vegetation that help stabilize a hillside and absorb water, more areas burned by fire may also lead to an increase in landslides and floods. Wildfires are projected to increase to an annual average in the city of 155 acres burned by 2050 and 144 acres burned by 2100.<sup>22</sup>

## Fire Protection Resources

Fire protection services in San Carlos are provided by contract through the Redwood City-San Carlos Fire Department (RC-SCFD), which operates two fire stations in San Carlos:

- Fire Station No. 13 at 525 Laurel Street
- Fire Station No. 16 at 1280 Alameda de las Pulgas

The RC-SCFD has an Insurance Services Office rating of Class 1 and has a Fire Prevention Bureau focused on reducing wildfire hazards and risks. The Fire Prevention Bureau provides the following functions and programs to San Carlos:

- Fire Safety Plan Review
- Fire Inspection of new and existing construction
- Consultation with prospective developers and builders on public safety issues
- Fire Investigation

<sup>20</sup> Cal-Adapt, 2024, Annual Averages, accessed October 8, 2024, <https://cal-adapt.org/tools/annual-averages/>.

<sup>21</sup> Cal-Adapt, 2024, Annual Averages, accessed October 8, 2024, <https://cal-adapt.org/tools/annual-averages/>.

<sup>22</sup> Cal-Adapt, 2024, Wildfire, accessed October 8, 2024, <https://cal-adapt.org/tools/wildfire>.



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- Mitigating complaints and other fire hazards
- Fire Public Education
- Participate in community outreach programs
- Juvenile Fire Setter Intervention Program

Chapter 4.14, *Public Services*, of this Draft EIR, provides additional details about fire protection resources and services in San Carlos.

## Evacuation and Access

Evacuation routes are designated roadways that allow many people to quickly leave an area due to a potential or imminent disaster. These routes should have sufficient capacity to accommodate the needs of the community, be safely and easily accessible, and allow people to travel far enough away to be safe from emergency conditions.

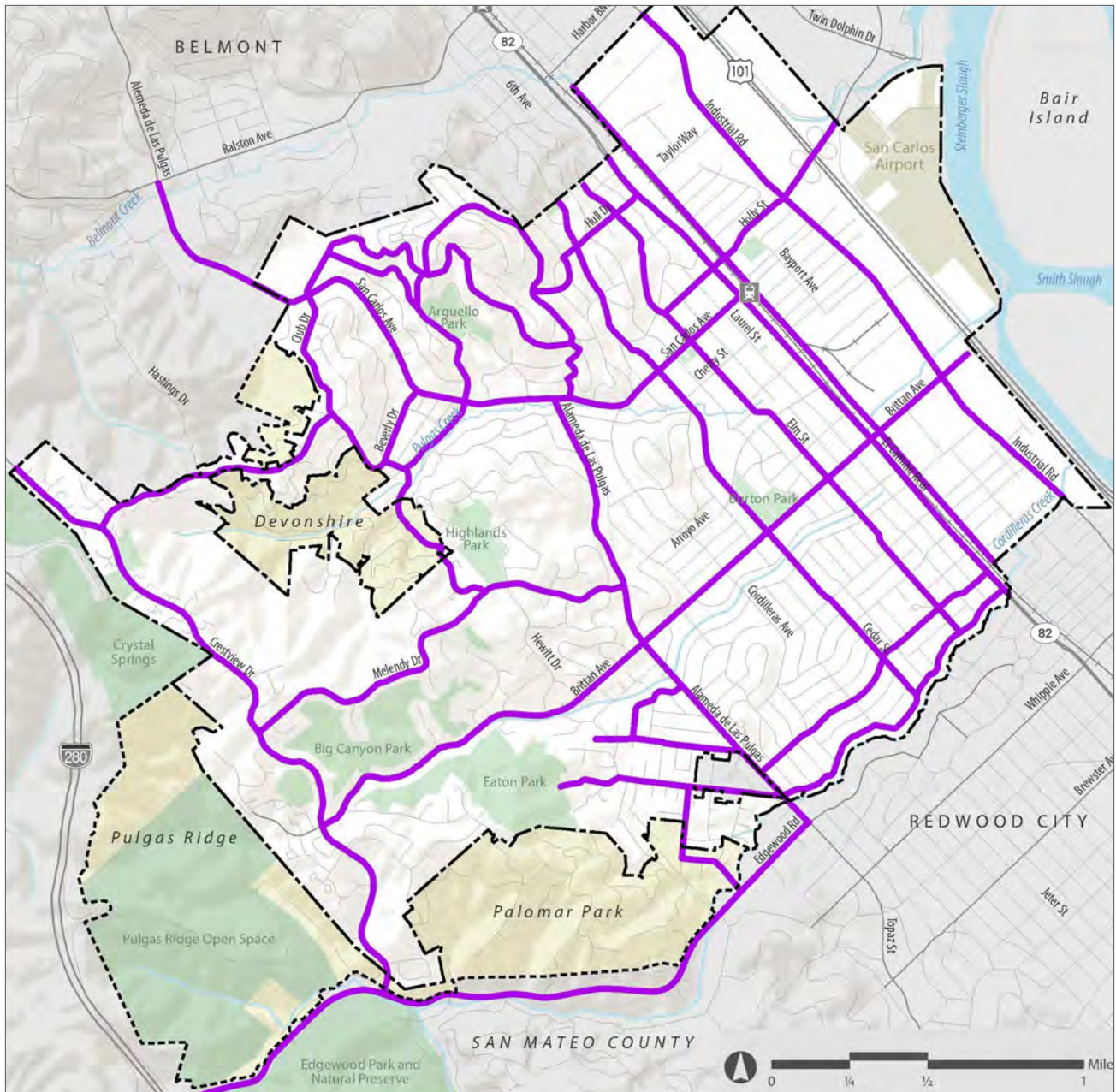
As shown on Figure 4.18-3, *Evacuation Routes*, San Carlos has several evacuation routes throughout the city, with primary evacuation routes including the following:

- |                                   |                         |
|-----------------------------------|-------------------------|
| ▪ Highway 101                     | ▪ San Carlos Avenue     |
| ▪ Interstate 280                  | ▪ Cañada Road           |
| ▪ El Camino Real (State Route 82) | ▪ Alameda de las Pulgas |
| ▪ Brittan Avenue                  | ▪ Crestview Drive       |
| ▪ Holly Street                    | ▪ Shoreway Road         |
| ▪ Industrial Road                 | ▪ Howard Avenue         |
| ▪ Old Country Road                |                         |

Several residential neighborhoods throughout the city only have one means of ingress/egress and are on single access roads. Figure 4.18-4, *Evacuation-Constrained Areas*, shows identified single access roadways in hazard zones throughout the city, including sites within wildfire hazard zones in the portion of the city. The City also uses Genasys, formerly known as Zonehaven, to determine the most efficient and effective evacuation routes based on the emergency type and location, provide real-time updates on changing conditions during an emergency, and allow residents to look up their evacuation zone by entering their address into an online platform.



## WILDFIRE



Source: United States Census Bureau, 2019. City of San Carlos, County of San Mateo, Urban Footprint, 2020.

### Evacuation Routes



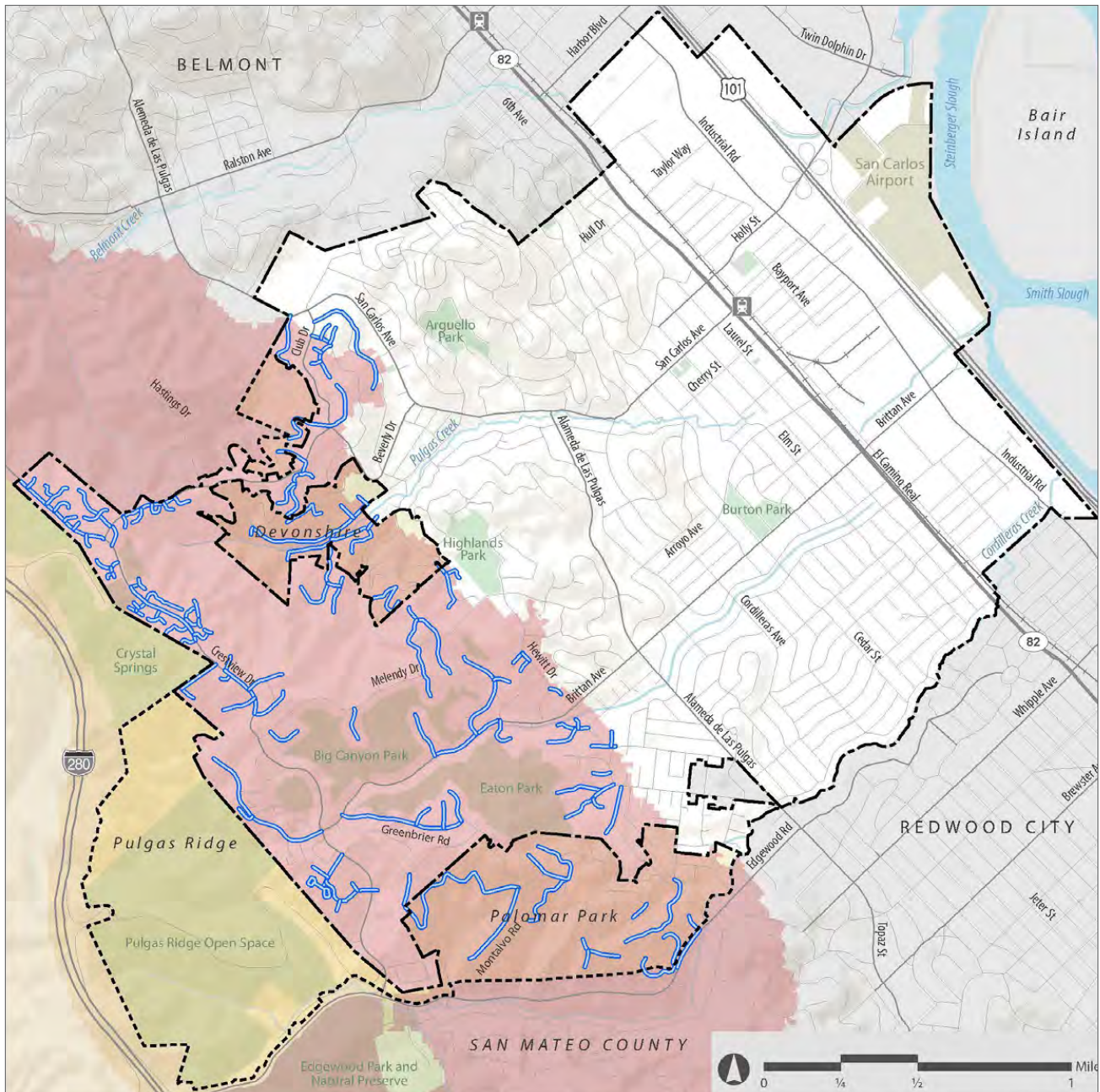
### Base Map Features

- City of San Carlos Boundary
- Sphere of Influence
- Major Streets
- Streets
- Caltrain Railroad and Stations
- Surrounding Jurisdictions
- Parks and Open Space
- Waterbodies
- San Carlos Airport

Figure 4.18-3  
Evacuation Routes



## WILDFIRE



Source: United States Census Bureau, 2019. City of San Carlos, County of San Mateo, Urban Footprint, 2020.

### Base Map Features

- City of San Carlos Boundary
- Sphere of Influence
- Major Streets
- Streets
- Caltrain Railroad and Stations
- Surrounding Jurisdictions
- Parks and Open Space
- Waterbodies
- San Carlos Airport

### Wildfire Hazards

- Very High
- High
- Moderate
- Single Access Roads

Figure 4.18-4  
Evacuation-Constrained Areas

## 4.18.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant wildfire impact if it would:

- WILD-1 Substantially impair an adopted emergency response plan or emergency evacuation plan.
- WILD-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.
- WILD-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.
- WILD-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.
- WILD-5 In combination with past, present, and reasonably foreseeable projects, result in cumulative wildfire resource impacts in the area.

## 4.18.3 IMPACT DISCUSSION

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<b>WILD-1</b>	<b>The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.</b>
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Adopted emergency response plans and emergency evacuation plans include those discussed under Section 4.18.1.1, *Regulatory Framework*, such as the San Carlos EOP. The proposed project could result in a significant impact if it substantially impairs the implementation of the EOP. Future development in the EIR Study Area could occur in very high FHSZs or WUI in western San Carlos as identified in the *San Carlos 2023-2031 Housing Element Sites Inventory*, as well as in the form of accessory dwelling units to single family residences.

Future development, regardless of whether it includes new development or redevelopment, is required to comply with adopted local, regional, and State plans and regulations addressing emergency access, response, and evacuation. Future development would be required to be consistent with the EOP to continue its facilitation in evacuation for the people living and working in wildfire-prone areas. Future development in very high FHSZs and/or the WUI would be required to comply with the Very High FHSZ Fire Safe Regulations, the CBSC, the CFC, and the SCMC, which have maximum requirements for lengths of single-access roads, minimum widths of roadways, and vegetation fuel management around roadways. In addition, implementation of the proposed 2045 General Plan Reset would not result in substantial changes to the circulation patterns or emergency access routes in the city that would conflict with or require changes to the EOP.

A temporary impact to emergency operations and evacuation under the proposed 2045 General Plan Reset could occur from construction of future development projects if they were to result in temporary lane closures that would potentially alter evacuation routes. Future development during the buildout

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horizon of the proposed project would also be required to comply with Very High FHSZ Fire Safe Regulations, the CBSC, the CFC, and the SCMC. These would be limited to the duration of the construction period, and direct impacts of construction would be evaluated during the permit review process by the City and RC-SCFD. Review and approval of temporary lane closures, if needed, for future development projects in the city would ensure that no inconsistencies with emergency evacuation plans would occur.

The Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to wildfire, including emergency response and evacuation. The following General Plan goals, policies, and actions would prepare for and facilitate evacuations caused by wildfires and other hazards:

- **Goal ESPS-3:** A resilient San Carlos is well prepared to minimize risks associated with wildfire.
  - **Policy ESPS-3.1:** Promote and improve, as necessary, inter-jurisdictional fire prevention assessment, planning, and projection; and consultation and communication regarding disaster or emergency plans of San Carlos and Mutual Aid with adjacent agencies including but not limited to San Mateo County, Redwood City, Belmont, and CAL FIRE.
  - **Action ESPS-3.1:** Maintain participation in the Joint Powers Authority Agreement with all fire departments in San Mateo County to ensure required response times for initial emergency deployment personnel and equipment.
  - **Action ESPS-3.2:** Preserve the local government agreement with California Department of Forestry and Fire Protection (CAL FIRE) for responses in the Mutual Threat Zone (MTZ) within the Wildland Urban Interface (WUI) areas of the city. Continue to provide equipment and personnel under the mutual aid agreement, with the State of California Office of Emergency Service (OES) Region II. This continued “reverse support” enables the City of San Carlos to receive “no cost” statewide mutual aid in the event of a declared large-scale emergency.
  - **Policy ESPS-3.2:** Conduct annual training for fire, emergency medical, and police staff including cross training with adjacent automatic or mutual aid emergency response departments. Regularly maintain, test, and update training and equipment to meet current standards.
  - **Action ESPS-3.4:** Continue to work with the Redwood City Fire Department to ensure that fire services are maintained at adequate levels. With subsequent Safety Element updates, assess and project future emergency service needs. Continue to monitor service area to ensure that all San Carlos areas have fire service. Monitor the City of San Carlos’ fire protection rating and work with the Redwood City and San Mateo County Fire Departments to correct deficiencies and to ensure ongoing training, including cross training is conducted.
  - **Policy ESPS-3.3:** Ensure adequate Fire Department resources (fire stations, personnel, and equipment) to meet response time standards, keep pace with growth, and provide a high level of service to the community.
  - **Action ESPS-3.5:** Train and educate public volunteers in basic fire safety response.
  - **Action ESPS-3.8:** When a fire has occurred in the VHFHSZ, evaluate if street design and size can be reconfigured to improve emergency access and evacuation efficiency.

- **Action ESPS-3.9:** If development is permitted within the VHFHSZ, require:
  - A Fire Protection Plan addressing: risk analysis, fire response capabilities, fire safety requirements (defensible space, infrastructure, and building ignition resistance), mitigation measures and design considerations for nonconforming fuel modification, and wildfire education maintenance and limitations;
  - Landscape/fuel modification installation, incorporating open areas to complement defensible spaces, identifying possible refuge areas, and mapping and providing multiple ingress and egress routes;
  - Resident evacuation plans and ways to effectively communicate those plans, including identifying the location and direction of evacuation routes and at least two points of ingress and egress; and
  - A roadside fuel reduction plan to prevent fires along public roads caused by vehicles.
- **Action ESPS-3.14:** Condition all new development and redevelopment to have adequate fire protection, incorporate and maintain fire safe design, including fuel modification zones, defensible space, two ingress/egress points, emergency vehicle access, and visible home addressing and street signage.
- **Action ESPS-3.17:** Continue code enforcement programs requiring private and public property owners to maintain buildings and properties to prevent conditions, remove blighted excessive or overgrown vegetation (e.g., trees, shrubs, weeds), and remove litter, rubbish, and illegally dumped items from properties.
- **Action ESPS-3.23:** Evaluate the City's roadways regarding access, alignments, etc. to facilitate fire, police, and ambulance access and resident egress in case of an emergency.
- **Policy ESPS-3.14:** Provide adequate evacuation routes and access for fire and emergency service vehicles to all San Carlos areas.
- **Policy ESPS-3.15:** Identify and implement measures to mitigate the single access roads and nonconforming roadways, as feasible.
- **Action ESPS-3.24:** Identify streets and key intersections that, due to pavement width, hairpin turns, and tight curves, if not cleared of vehicles, may interfere with emergency vehicle access and/or resident evacuation during a fire.
- **Action ESPS-3.25:** Identify the potential for street widening and improvement during regular Capital Improvement project maintenance, e.g., emergency access, utility undergrounding, resurfacing, and American with Disabilities (ADA) compliance.
- **Action ESPS-3.26:** Prohibit parking on one or both sides of a street identified as having the potential to interfere with emergency vehicle access and/or resident evacuation during a fire, when Red Flag alerts have been issued.
- **Action ESPS-3.27:** In conjunction with the use of the Zonehaven system, supplement the evacuation plan as shown in Figure 8-12, with special emphasis placed on the areas that do not have sufficient access and egress identified on Figure 8-13. Recommend improvements to ensure adequate evacuation capabilities.

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- **Action ESPS-3.28:** Conduct a study to review evacuation routes, their capacity, safety, and viability under a range of emergency scenarios as set forth in AB 747. Determine remedial actions, as appropriate. Update evacuation plans with each update of the Safety Element to address changes in at-risk areas and populations.

Adherence to these General Plan goals, policies, and actions would collectively enhance San Carlos's preparedness for wildfire emergencies and improve evacuation protocols, increasing the effectiveness of the EOP. Implementation of the proposed 2045 General Plan Reset would not substantially impair an adopted emergency response plan or emergency evacuation plan. Thus, this impact is considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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WILD-2	The proposed project could, 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.
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As discussed in Section 4.18.1.2, *Existing Conditions*, the topography in wildfire-prone areas of San Carlos consists of hilly to steep slopes on the eastern edge of the Santa Cruz Mountains. These topographical features can create wind tunnels and canyons that can trap heat and embers, increasing fire intensity and accelerating the spread of wildfires. Construction of future development projects in these areas may require grading and site preparation activities that could change the slope of a single parcel or site.

Though most future development would occur in the eastern and shoreline areas of the city, development and redevelopment in San Carlos could also occur in the steeper western portions of the city. All future development in San Carlos in very high FHSZs or the WUI would be required to comply with the CBSC, Very High FHSZ Fire Safe Regulations, and SCMC Hillside Overlay District and Grading and Excavations requirements, which include standards to minimize the spread of wildfire and soil instability due to slopes. Compliance with the SCMC Hillside Overlay District and Grading and Excavation regulations require the minimization of soil erosion and fire danger associated with development on the hillsides. Additionally, the proposed 2045 General Plan Reset Environmental Safety and Public Services (ESPS) Element includes Policy ESPS-3.10, which enforces fire standards and regulations when reviewing building plans and conducting building inspections.

Wildfire smoke could potentially travel up a slope during a wildfire. Therefore, even with existing regulatory requirements, SCMC requirements, and General Plan goals, policies and actions, future development under the proposed 2045 General Plan Reset could expose people to the uncontrolled spread of wildfire or pollutant concentrations due to slope.

As discussed in Section 4.18.1.2, *Existing Conditions*, San Carlos is prone to Diablo winds in late fall through early spring. These winds have high speeds, with wind gusts of over 80 miles per hour, and can

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shift suddenly, and they are often accompanied by low humidity.<sup>23</sup> They create dangerous conditions for starting and spreading wildfires during the drier months of the year. Diablo winds also spread wildfire smoke hazards, as can prevailing winds.

Section 4.18.1.1, *Regulatory Framework*, describes plans, policies, regulations, and procedures that help to reduce wildfire risks. The 2024 CAL FIRE Strategic Fire Plan, 2021 California Wildfire and Forest Resilience Action Plan, San Mateo County MJHMP, Santa Cruz San Mateo County Community Wildfire Protection Plan, San Carlos CMAP, and City of San Carlos EOP, are intended to reduce wildfire hazards and coordinate response to these hazards on a statewide, regional, and local scale. In addition, the Bay Area Air Quality Management District and San Mateo County Health Agency provide air quality alerts, advisories, and an interactive online map to view current air quality conditions in the region. Furthermore, the proposed 2045 General Plan Reset Environmental Safety and Public Services (ESPS) Element includes Policy ESPS-10.1, which requires the city to consider establishing resilience hubs that offer refuge during extreme heat and severe weather events due to regional wildfire smoke.

Future development under the proposed 2045 General Plan Reset in the western portion of the city could exacerbate wildfire risks by adding people to wildfire-prone areas and exposing people in the city and surrounding jurisdictions to pollutant concentrations from a wildfire, especially during Diablo Wind events. A wildfire combined with Diablo winds could expose residents in the city to the uncontrolled spread of wildfire.

Other factors, such as vegetation, have the potential to exacerbate wildfire risks. The grassland, brush, and woodland areas of western San Carlos are easily ignited, especially during fall when temperatures and winds are high and relative humidity is low. During these conditions vegetation can dry out, particularly in areas with unirrigated vegetation, becoming extremely flammable and increasing wildfire risks.

As described in Section 4.18.1.1, *Regulatory Framework*, the San Mateo County MJHMP and San Carlos CMAP contain several vegetation management, fuel reduction and maintenance, and fuel break projects to reduce the uncontrolled spread of wildfire due to vegetation on both public and private land. Additionally, all future development in wildfire-prone areas in San Carlos would be required to comply with Very High FHSZ Fire Safe Regulations, PRC Section 4291, the CFC, and the SCMC. These regulations have specific requirements for new and existing development to create defensible space and extensive fuel reduction within 100 feet of a structure, an ember-resistant zone within 5 feet of a structure, and the overall maintenance of properties to reduce the risk of uncontrolled fires or the spread of fires to other properties.

Furthermore, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to wildfire, including vegetation management. The following General Plan goals, policies, and actions would serve to reduce wildfire risks associated with vegetation:

<sup>23</sup> Mitchell, Chaffin. 2019. "What are Diablo Winds?". <https://www.accuweather.com/en/severe-weather/what-are-diablo-winds/613878>, accessed October 9, 2024.

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- **Goal ESPS-3:** A resilient San Carlos is well prepared to minimize risks associated with wildfire.
  - **Policy ESPS-3.7:** Consider the preservation of undeveloped ridgelines to reduce fire risk and improve fire protection.
  - **Policy ESPS-3.9:** Incorporate or require the incorporation of fire safety features in new development and redevelopment.
  - **Policy ESPS-3.10:** Require new residential developments to have adequate fire protection and be more wildfire resistant by establishing greenbelt zones for fire-resistant landscaping.
  - **Policy ESPS-3.11:** Require new residential development to be designed to reduce wildfire hazard and improve defensibility (e.g., clustering lots, managed greenbelts, water storage, fuel modification zones, and vegetation setbacks).
  - **Action ESPS-3.9:** If development is permitted within the VHFHSZ, require a Fire Protection Plan addressing risk analysis, fire response capabilities, fire safety requirements (defensible space, infrastructure, and building ignition resistance), mitigation measures, design considerations for nonconforming fuel modification, and wildfire education maintenance and limitations. Include landscape/fuel modification installation and resident evacuation plans.
  - **Action ESPS-3.13:** Ensure new and existing public and privately owned properties are constructed and maintained to minimize fire hazard threats.
  - **Action ESPS-3.14:** Condition all new development and redevelopment to incorporate and maintain fire-safe design, including fuel modification zones and emergency vehicle access.
  - **Action ESPS-3.16:** Continue to enforce the brush clearance/weed abatement program for both private and public roads and City-owned open spaces.
  - **Action ESPS-3.20:** Within the VHFHSZ, work with local fire departments and organizations to ensure the installation of fire protection water systems and long-term maintenance of defensible space.
- **Goal ESPS-13:** Ensure adequate public services and high-quality design of public facilities to make San Carlos a safe, enjoyable, and quality community in which to live, work and shop.
  - **Policy ESPS-13.10:** Require existing overhead utility lines be placed underground in new development and redevelopment through a phased program of conversion in existing overhead areas.

These policies would ensure that fire hazard reduction measures occur, vegetation is maintained to reduce wildfire risks, and that existing and new development in grassland, scrub, and woodland areas would incorporate vegetation management measures. However, even with existing regulatory requirements and the General Plan goals, policies, and actions, future development under the proposed 2045 General Plan Reset could expose people to the uncontrolled spread of wildfire or pollutant concentrations due to factors such as vegetation.

Adherence to the above building practices, fire safety regulations, and vegetation fuel management requirements would reduce the potential for exacerbating wildfire risks. However, due to the programmatic nature of this analysis, the unknown details and potential impacts of specific future



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development projects under the proposed 2045 General Plan Reset, and the potential for future development to be in wildfire-prone areas, impacts would still be potentially *significant*. Numerous preventative measures exist to reduce wildfire risks; however, as described below, no additional feasible measures are available beyond the proposed policies and actions included in the 2045 General Plan Reset to reduce this impact.

**Impact WILD-2:** Future development during the buildout horizon of the proposed project could increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.

**Mitigation Measure WILD-2:** None available.

**Significance with Mitigation:** Significant and unavoidable. The implementation of the proposed project could increase population, buildings, and infrastructure in areas prone to wildfires. Although the goals, policies, and actions outlined in the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset, along with mandatory state wildfire hazard reduction measures, reduce risks in these wildfire-prone areas, some impacts related to the potential increase in pollutant concentrations and the uncontrolled spread of wildfire would be reduced, but not to a less-than-significant level.

There are numerous preventative measures the City considers in wildfire-prone areas, from defensible space requirements to WUI building code requirements. The proposed 2045 General Plan Reset includes specific policies and actions that require both existing developments and new projects to establish and maintain fire-safe vegetation around structures and roadways, enforce fire-safe standards, and create fuel breaks. Additionally, new developments will be mandated to prepare Fire Protection Plans, ensuring comprehensive measures are in place to address wildfire hazards. These strategies represent the most effective wildfire hazard reduction measures available. However, to eliminate the risks associated with wildfires, it would be necessary to prohibit development in areas designated as very high fire hazard severity zones or in the wildland urban interface. Prohibiting new development in this portion of San Carlos is not feasible or practical because the City has a responsibility to meet other, conflicting obligations, under different State laws, including increasing the number and type of housing available and allowing reconstruction of homes burned by wildfires. Therefore, this measure is considered and rejected, and there are no feasible mitigation measures beyond the policies and plans described above. Given the potential unknown impacts related to future development under the proposed project, impacts at the programmatic level are expected to remain *significant and unavoidable*. This conclusion does not rule out the possibility of finding less-than-significant impacts at the project-specific level.

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<b>WILD-3</b>	<b>The proposed project would not 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.</b>
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Future development during the buildout horizon of the proposed 2045 General Plan Reset would not require the installation of new roadways as discussed in Chapter 4.15, *Transportation*, of this Draft EIR,

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but would include the development and construction of fuel breaks, emergency water sources, transmission lines, and other utilities to serve future development in San Carlos.

- **Fuel Breaks.** Environmental Safety and Public Services (ESPS) Element Policies ESPS-3.10 and ESPS-3.11, and Actions ESPS-3.9 and ESPS-3.14 require new development and redevelopment throughout the city, and in very high FHSZs to install greenbelts or fuel breaks, create and maintain defensible space, and conduct vegetation management through fuel modification zones. Policy ESPS-3.10 also requires new residential developments to establish greenbelt zones for fire resistant landscaping. These activities would occur throughout the city, with additional activities required in very high FHSZs and the WUI areas in western San Carlos.
- **Emergency Water Sources.** Environmental Safety and Public Services (ESPS) Element Policy ESPS-3.12 and Actions ESPS-3.12 and ESPS-3.13, ensure adequate water supply is available, specifically to meet fire-suppression needs of a project and through coordination with water suppliers to provide adequate water for peak fire flow. Action ESPS-3.20 requires the installation of fire protection water systems for new development, including fire sprinklers, suppression systems, and infrastructure for adequate fire flow.
- **Power lines.** Future development under the proposed 2045 General Plan Reset would require electrical line installations and connections to provide power to buildings and infrastructure. Environmental Safety and Public Services (ESPS) Element Policy ESPS-13.10 requires existing overhead utility lines to be placed underground in new or redevelopment through a phased program of conversation in existing overhead areas throughout the city.
- **Other Utilities.** Future development under the proposed 2045 General Plan Reset would also require the installation and maintenance of water systems, sewer systems, internet infrastructure, and stormwater systems in wildfire-prone areas.

These types of improvements would involve temporary construction and result in changes to the existing built environment. The installation and operation of new above-ground power transmission lines would create a higher risk of wildfire compared to other infrastructure. However, as stated above, proposed Policy ESPS-13.10 encourages the undergrounding of new and existing electrical transmission lines, which is consistent with SCMC Chapter 13.12, *Undergrounding Utility Districts*. Additionally, CPUC requires maintenance of vegetation around power lines, strict wire-to-wire clearances, annual inspections of above-ground power lines, and preparation of fire prevention plans for above-ground power lines in high-fire-threat districts. These measures would reduce the wildfire risks associated with the installation and maintenance of power lines.

Development in the wildfire-prone areas of western portion of San Carlos would also be required to comply with building and design standards in the California Standards Building Code and CFC, which include provisions for fire-resistant building materials, clearance of debris, and fire safety requirements during demolition and construction activities. Additionally, PRC Section 4291 requires a defensible space within 100 feet of a structure and an ember-resistant zone within 5 feet of a structure. Furthermore, Very High FHSZ Fire Safe Regulations would prevent structures from being within 30 feet of a roadway, reducing the potential for new roadways to exacerbate wildfire risks. These measures, along with proposed Policy ESPS-13.10 for the undergrounding of power lines, creation and maintenance of

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vegetation and defensible space, and ensuring the availability of adequate water supplies would minimize wildfire risks associated with the installation and maintenance of infrastructure.

Such infrastructure and maintenance activities would also be required to comply with the adopted State regulations, SCMC standards, and the General Plan policies to mitigate the impact of infrastructure on the environment. Therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>WILD-4</b>	<b>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.</b>
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Wildfires can trigger additional hazards like flooding and landslides, especially during the rainy season. When fires occur on hillsides, they destroy vegetation that stabilizes the slopes and creates hydrophobic conditions, preventing water absorption. This can result in landslides, debris flows, and flooding. The proposed project would result in a significant impact if—due to slopes, drainage patterns, or postfire slope instability—it would expose people or structures to significant risks from landslides, debris flows, or flooding.

As discussed in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, parts of San Carlos are in the 100-year and 500-year floodplains. As shown on Figure 4.9-2, *FEMA Flood Zones*, in Chapter 4.9 of this Draft EIR, floodplains in the city generally follow the drainage patterns of the Pulgas Creek, Brittan Creek, and Cordilleras Creek, which flow east from the Santa Cruz Mountains towards the San Francisco Bay. 100-year and 500-year flood zones also occur along El Camino Real east towards the San Francisco Bay.

As discussed in Chapter 4.6, *Geology and Soils*, slopes in the eastern portion of the city are in areas with high landslide susceptibility, which also coincide with very high FHSZs. These areas are considered prone to earthquake and rainfall induced landslides. This overlap may cause areas outside of a flood hazard or landslide-susceptible zone to be affected by runoff, postfire slope instability, or drainages changes following a wildfire.

Future development under the proposed 2045 General Plan Reset could contribute to postfire slope instability or drainage changes upstream. However, all new development in the city is required to comply with State and local regulations, such as the CBC and SCMC, both of which have provisions to reduce flooding and landslides in existing and new development. For example, Section 1803 of the CBC requires a geotechnical investigation that must assess existing landslide susceptibility on a project site. Furthermore, the Environmental Safety and Public Services (ESPS) Element of the proposed 2045 General Plan Reset contains goals, policies, and actions that require local planning and development decisions to consider impacts to wildfire, including runoff, post-fire slope instability, or drainage changes. The following General Plan goals, policies, and action would serve to reduce wildfire risks associated with runoff, post-fire slope instability, or drainage changes:

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- **Goal ESPS-1:** Reduce the potential loss of life, injury, and property damage due to seismic and geologic hazards.
  - **Policy ESPS-1.1:** The City Building Official shall verify geotechnical and soils reports for development in areas where potentially serious geologic risks exist. These reports shall address the degree of hazard, design parameters for the project based on the hazard, and appropriate mitigation measures. Based on the findings of these reports, the City shall require that new structures are designed and built to withstand the effects of seismically-induced ground failure.
  - **Policy ESPS-1.2:** Prohibit structural development in known areas where seismic and geological hazards cannot be mitigated.
  - **Policy ESPS-1.3:** Continue to monitor and enforce mitigation measures to reduce risk for projects where geological and seismic hazards can be mitigated.
- **Goal ESPS-2:** Reduce hazards associated with flooding and inundation.
  - **Policy ESPS-2.10:** Incorporate stormwater drainage systems in development projects to effectively control the rate and amount of runoff to prevent increases in downstream flooding potential.
  - **Action ESPS-2.5:** Work with private property owners who own creek frontage and educate the public on bio-engineering of creeks to stabilize banks and maintain natural creek forms.

New development complying with these policies of the San Carlos General Plan would not expose people or structures to downslope landslides or downstream flooding due to postfire hazards. Furthermore, as identified in impact discussions WILD-2 and WILD-3, future development under the proposed 2045 General Plan Reset must also comply with best management practices regarding wildfire prevention, action, and recovery as outlined in the San Carlos EOP, San Carlos CMAP, and San Mateo County MJHMP. All future development, regardless of the location, is required to comply with adopted local, regional, and State plans and regulations addressing wildfire prevention, which would minimize risks of postfire hazards. Compliance with these policies and regulatory requirements would ensure that impacts from postfire instability would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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WILD-5	The proposed project would, in combination with past, present, and reasonably foreseeable projects, result in cumulative wildfire resources impacts in the area.
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The cumulative setting includes future development in San Carlos and the surrounding region. Future development during the buildout horizon of the proposed 2045 General Plan Reset would not impair an adopted emergency response plan or emergency evacuation plan; would not exacerbate wildfire risks due to the installation or maintenance of infrastructure; and would not cause downslope or downstream post-fire flooding or landslide hazards. Cumulative development in the surrounding unincorporated county and local jurisdictions would be subject to the same State and regional regulations applicable to future projects over the buildout horizon of the proposed project.

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However, the proposed project would result in significant and unavoidable impacts where it would potentially expose project occupants to pollutant concentrations from wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors, as described in impact discussion WILD-2. The addition of other proposed development projects in adjacent jurisdictions in similar environments that are sloped and contain high fuel loads would have the potential to contribute to cumulative wildfire risks. These projects would have the potential to result in significant environmental impacts and they could also potentially expose project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors. These would potentially result in cumulatively considerable impacts when taken into consideration with the proposed project. Future development in San Carlos and the surrounding region would be required to comply with the same State regulations, such as SRA and Very High FHSZ Fire Safe Regulations, PRC Section 4291, the CBSC, and CFC. Lands throughout San Mateo County would also implement wildfire reduction strategies through implementation of the Santa Cruz San Mateo County Community Wildfire Protection Plan and the San Mateo County MJHMP. However, the increase of development projects in surrounding areas within the very high FHSZ and WUI would result in a cumulatively significant impact due to the inherent risk of any increased human activity in these areas. Therefore, cumulative wildfire impacts would be considered *significant*. Numerous preventative measures exist to reduce wildfire risks; however, as described below, no additional feasible measures are available beyond the proposed policies and actions included in the 2045 General Plan Reset to reduce this cumulative impact.

**Impact WILD-5:** Future development during the buildout horizon of the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas, Very High Fire Hazard Severity Zones (FHSZ), or Wildland-Urban Interface (WUI), result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.

**Mitigation Measure WILD-5:** None available.

**Significance with Mitigation:** Significant and unavoidable. As described for Impact WF-2, even with implementation of the General Plan goals, policies, and actions, the only way to fully avoid the cumulative wildfire impact is to prohibit development in the Very High FHSZs and WUI throughout the region. As a full prohibition of development in these areas is not feasible in the region, this impact is *significant and unavoidable*. Please see impact discussion WF-2 for additional discussion.

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## 5. Alternatives

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The following discussion is intended to inform the public and decision makers of feasible alternatives to the proposed project that would avoid or substantially lessen any of the significant effects of the proposed project. The California Environmental Quality Act (CEQA) Guidelines set forth the intent and extent of alternatives analysis to be provided in an environmental impact report (EIR). Section 15126.6(a) of the CEQA Guidelines states that:

*An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of 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. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives, which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.*

### 5.1 INTRODUCTION

The alternatives evaluated in this Draft EIR were developed consistent with Section 15126.6(b) of the CEQA Guidelines, which states that:

*Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the 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.*

Section 15126.6(c) of the CEQA Guidelines states:

*The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.*

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### 5.2 PROJECT OBJECTIVES

The primary purpose of the proposed project is to plan for the growth of San Carlos over a 20-year time horizon and to:

- Allow for a mix of development to support the City's economic resiliency and to sustain a robust local economy.
- Preserve, protect, and promote industrial, commercial, and office uses to maintain a thriving ecosystem of local businesses and to provide for local jobs.
- Provide a mix of housing that meets the needs of a diverse community, as outlined in the 2023-2031 Housing Element and for future Housing Element cycles.
- Make minor updates to the 2030 General Plan to reference recent City initiatives, plans or new State regulations.

### 5.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

All the potential environmental impacts associated with adoption and implementation of the proposed project were found to be either less than significant without mitigation or less than significant with mitigation, except for impacts to air quality (AQ), greenhouse gas emissions (GHG), transportation (TRAN), and wildfire (WILD), which were found to be significant and unavoidable with mitigation measures at the program level. Although the proposed 2045 General Plan results in significant and unavoidable impacts, the identification of these program-level impacts do not preclude the finding of less-than-significant impacts for subsequent development proposals analyzed at the project level that do not exceed the applicable project-level thresholds. The significant and unavoidable impacts identified for the proposed project include the following:

#### Air Quality

**Impact AQ-2.1:** Construction of development projects within the buildout horizon of the proposed project would generate emissions that would exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds and cumulative contribute to the nonattainment designations of the San Francisco Bay Area Air Basin.

**Impact AQ-2.2:** Operation of development projects under the proposed project could generate operational emissions that exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds for volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>).

**Impact AQ-3:** Construction emissions associated with future development projects could expose air quality-sensitive receptors to substantial toxic air contaminant concentrations and exceed the Bay Area Air Quality Management District's (BAAQMD) project-level and cumulative significance thresholds.



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### Greenhouse Gas Emissions

**Impact GHG-1:** Implementation of the proposed project would exceed the greenhouse (GHG) emissions threshold of no net increase from existing conditions and would therefore not make substantial progress toward the long-term GHG reduction goal under Senate Bill (SB) 32 or the carbon neutrality goal under Assembly Bill (AB) 1279.

### Transportation

**Impact TRAN-2:** The proposed project could exceed the City's VMT significance criteria by generating VMT per service population, per capita, and per employee that exceeds a threshold of 15 percent less than the regional average and by increasing total countywide VMT.

### Wildfire

**Impact WILD-2:** Future development during the buildout horizon of the proposed project could increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.

**Impact WILD-5:** Future development during the buildout horizon of the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas, Very High Fire Hazard Severity Zones (FHSZ), or Wildland-Urban Interface (WUI), result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.

## 5.4 OVERVIEW OF PROJECT ALTERNATIVES

Two project alternatives and the comparative merits of the alternatives are discussed in this section in accordance with the CEQA Guidelines.

The alternatives to be analyzed in comparison to the proposed project include:

- No Project Alternative
- Reduced Non-Residential Buildout Alternative

The first alternative is the CEQA-required "No Project" Alternative, which assumes the current General Plan 2030 remains in effect and is not replaced by the proposed project. The second alternative is the Reduced Non-Residential Buildout Alternative and is intended to reduce the projected non-residential square footage within the EIR Study Area.

### 5.4.1 ASSUMPTIONS AND METHODOLOGY

This alternatives analysis is presented as a comparative analysis to the proposed project. The development intensity for the alternatives varies from the proposed project. The estimated growth under each alternative, as well as the proposed project, is provided in Table 5-1, *2045 Development Projections for the Proposed Project and Project Alternatives*.

## ALTERNATIVES

**TABLE 5-1      2045 DEVELOPMENT PROJECTIONS FOR THE PROPOSED PROJECT AND PROJECT ALTERNATIVES (NET CHANGE)**

Category	Proposed 2045 General Plan Reset	No Project Alternative	Reduced Non-Residential Buildout Alternative
Housing Units	21,560	21,560	21,560
Population	46,450	46,450	46,450
Non-Residential Square Footage <sup>a</sup>	18,803,500	12,564,100	15,683,780
Jobs <sup>b</sup>	47,320	29,310	38,310

Notes: SOI = sphere of influence

a. Non-residential square footage includes commercial, office, research and development (R&D), and industrial square footage and does not include public uses.

b. Job numbers include commercial, office, R&D, industrial, and other jobs, including public jobs.

Source: PlaceWorks, 2024.

The alternatives analysis assumes that all applicable mitigation measures recommended for the proposed project and the General Plan goals, policies, and actions would apply to the Reduced Non-Residential Buildout Alternative but would not apply to the No Project Alternative.

### 5.4.2 SUMMARY OF ALTERNATIVES EVALUATION

The following discussion compares the environmental impacts of the alternatives with those of the proposed project for each of the environmental topics analyzed in detail in Chapter 4, *Environmental Analysis*, of this Draft EIR. The impacts of each alternative are classified as less than (<), similar or comparable to (=), or greater than (>) the level of impacts associated with the proposed project. Table 5-2, *Comparison of Impacts of the Proposed Project and Project Alternatives*, summarizes the relative impacts of each of the alternatives compared to the proposed project.

## ALTERNATIVES

**TABLE 5-2 COMPARISON OF IMPACTS OF THE PROPOSED PROJECT AND PROJECT ALTERNATIVES**

Topic	Proposed Project <sup>a</sup>	No Project Alternative	Reduced Non-Residential Buildout Alternative
Aesthetics	LTS	=	=
Air Quality	SU	<	<
Biological Resources	LTS/M	>	=
Cultural Resources	LTS	<	<
Energy	LTS	<	=
Geology and Soils	LTS	<	<
Greenhouse Gas Emissions	SU	=	<
Hazards and Hazardous Materials	LTS	=	=
Hydrology and Water Quality	LTS	=	=
Land Use and Planning	LTS	=	=
Noise	LTS	=	<
Parks and Recreation	LTS	=	=
Population and Housing	LTS	=	=
Public Services	LTS	=	=
Transportation	SU	<	=
Tribal Cultural Resources	LTS	>	<
Utilities and Service Systems	LTS	=	=
Wildfire	SU	=	=

Notes:

<sup>a</sup>. The impacts listed in this column represent the highest significance determination for each respective standard of significance.

LTS	Less than Significant	<	Lessened impact in comparison to the proposed project
LTS/M	Less than Significant with Mitigation	=	Similar impact in comparison to the proposed project
SU	Significant and Unavoidable	>	Greater impact in comparison to the proposed project

## 5.5 NO PROJECT ALTERNATIVE (CURRENT GENERAL PLAN)

### 5.5.1 DESCRIPTION

Pursuant to CEQA Guidelines Section 15126.6(e)(1), the No Project Alternative is required as part of the “reasonable range of alternatives” to allow decision makers to compare the impacts of approving the proposed project with the impacts of taking no action or not approving the proposed project. Consistent with CEQA Guidelines Section 15126.6(e)(3)(A), when the project is the revision of a plan, as in this case, the no project alternative will be the continuation of the existing plan(s). Under the No Project Alternative, future development in San Carlos would continue to be subject to existing policies, regulations, development standards, and land use designations of the existing General Plan 2030.

As described in Chapter 3, *Project Description*, of this Draft EIR, the existing General Plan 2030 was adopted in 2009 and included a horizon year of 2030. Six elements of the General Plan 2030 (housing, safety, land use, circulation and scenic highways, environmental management, and noise) were amended in 2023. A focused update is necessary to respond to continued interest in new development throughout the city, including housing, and extend the planning horizon to 2045.

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Pursuant to CEQA Guidelines Section 15126.6(e)(3)(C), the City of San Carlos, acting as the lead agency, should analyze the impacts of the No Project Alternative by projecting what would reasonably be expected to occur in the foreseeable future if the proposed project were not approved, based on current plans and consistent with available infrastructure and community services. Under the No Project Alternative, none of the applicable mitigation measures recommended for the proposed project would apply, and none of the modified General Plan language would be adopted.

Buildout projections for the No Project Alternative are shown in Table 5-3, *Development Projections Under the No Project Alternative*. No Project Alternative assumes development of projects already in the development pipeline only and no additional non-residential growth or adoption of the Downtown Specific Plan (DTSP) or the Northeast Area specific Plan (NEASP). Overall residential growth would be the same as under the proposed project but, because the NEASP would not be adopted, new housing would not be introduced in the Northeast area.

**TABLE 5-3 DEVELOPMENT PROJECTIONS UNDER THE NO PROJECT ALTERNATIVE**

Category	Existing Conditions (2024)			No Project Alternative Projected Net Change (2024-2045)			No Project Alternative Buildout (2045)		
	City	SOI	Total	City	SOI	Total	City	SOI	Total
Housing Units	12,460	790	<b>13,250</b>	8,300	0	<b>8,300</b>	20,770	790	<b>21,560</b>
Population	28,890	1,940	<b>30,830</b>	15,620	0	<b>15,620</b>	44,510	1,940	<b>46,450</b>
Non-Residential Square Footage <sup>a</sup>	9,776,200	100,000	<b>9,876,200</b>	2,687,900	0	<b>2,687,900</b>	12,464,100	100,000	<b>12,564,100</b>
Jobs <sup>b</sup>	20,410	370	<b>20,780</b>	8,530	0	<b>8,530</b>	28,940	370	<b>29,310</b>

Notes: SOI = sphere of influence

a. Non-residential square footage includes commercial, office, research and development (R&D), and industrial square footage and does not include public uses.

b. Job numbers include commercial, office, R&D, industrial, and other jobs, including public jobs.

Source: PlaceWorks, 2024.

## 5.5.2 IMPACT DISCUSSION

The potential environmental impacts associated with the No Project Alternative when compared to the proposed project are described herein.

### 5.5.2.1 AESTHETICS

As described in Chapter 4.1, *Aesthetics*, of this Draft EIR, the proposed project would not result in any significant impacts related to aesthetics and no mitigation measures are required.

Under both the proposed project and the No Project Alternative, new development would occur based on the City's existing General Plan land use and zoning maps and regulations. Due to the built-out nature of the EIR Study Area, under both the proposed project and the No Project Alternative, new

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development would be concentrated in infill development sites. Thus, development would not be spread throughout the city and impacts to scenic vistas would be similar when compared to the proposed project.

There are no officially designated scenic view corridors, vistas, or State-designated scenic highways within, or in the vicinity of, the EIR Study Area. Therefore, like the proposed project, the No Project Alternative would not damage existing scenic resources associated with scenic view corridors, vistas, or State-designated scenic highways and impacts would be similar.

Under both the proposed project and the No Project Alternative, project approval would be required to comply with the applicable planning documents that govern scenic quality in the city, as described in Section 4.1.1.1, *Regulatory Framework*, in Chapter 4.1 of this Draft EIR. Thus, impacts would be similar to the proposed project.

Similar to the proposed project, the No Project Alternative would result in new lighting sources that could produce sources of glare. Future development under both the proposed project and the No Project Alternative would be required to comply with best management practices in CALGreen and the San Carlos Municipal Code (SCMC) provisions that ensure new land uses do not generate excessive light levels and that future development reduce light and glare spillover to surrounding land uses. Therefore, impacts related to light and glare would be similar when compared to the proposed project.

Overall, development in the EIR Study Area under the No Project Alternative would continue to be subject to the current policies and regulations that guide development in San Carlos. As such, impacts related to aesthetics would be *similar* when compared to the proposed project.

### 5.5.2.2 AIR QUALITY

As described in Chapter 4.2, *Air Quality*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts during the construction and operational phases even with implementation of Mitigation Measures AQ-2.1, AQ-2.2, and AQ-3.

The No Project Alternative would continue to be subject to the current land use regulations that guide development in San Carlos and the general policy framework of the current 2030 General Plan. Similar to the proposed project, the No Project Alternative would not conflict with the 2017 Clean Air Plan and would not hinder the Bay Area Air Quality Management District (BAAQMD) from implementing the control measures in the 2017 Clean Air Plan. Additionally, like the proposed project, the No Project Alternative would not generate any substantial odors.

The No Project Alternative would continue development as allowed under the existing General Plan 2030, which would result in less development in the EIR Study Area compared to the proposed project. Development under both the proposed project and the No Project Alternative would be subject to BAAQMD's basic control measures for fugitive dust control and screening sizes. Additionally, future development under both the proposed project and the No Project Alternative could result in construction activities within 1,000 feet of residential and other sensitive land uses, thus, temporarily elevating concentrations of toxic air contaminants and diesel particulate matter in the vicinity of

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sensitive land uses. While future development under the No Project Alternative would be subject to the same regulations as the proposed project to mitigate construction impacts, less development—and thus reduced emission levels—would occur under the No Project Alternative; therefore, construction air quality impacts would be lessened when compared to the proposed project.

Under the No Project Alternative, reduced development would occur compared to the proposed project; therefore, reduced direct and indirect criteria air pollutant emissions from energy (e.g., natural gas use) and area sources (e.g., aerosols and landscaping equipment) would occur. Under both the proposed project and the No Project Alternative, subsequent environmental review of applicable development projects would be required to assess potential impacts under BAAQMD's project-level thresholds. As shown in Appendix D, *Transportation Data*, of this Draft EIR, VMT per service population and VMT per employee would be higher under the proposed project than No Project Alternative conditions. Although both the proposed project and the No Project Alternative would reduce total VMT in comparison to existing conditions, the No Project Alternative would reduce VMT further than the proposed project in VMT per service population and VMT per employee and result in a lessened impact when compared to the proposed project.

Therefore, because there is less development and greater VMT reduction under the No Project Alternative, this alternative would result in *lessened* air quality impacts when compared to the proposed project.

### 5.5.2.3 BIOLOGICAL RESOURCES

As described in Chapter 4.3, *Biological Resources*, of this Draft EIR, the proposed project would not result in any significant impacts related to biological resources and no mitigation measures are required.

The EIR Study Area is not within any local, regional, or State habitat conservation plan areas. Therefore, neither the proposed project nor the No Project Alternative would conflict with the conservation strategy in any Habitat Conservation Plan or Natural Community Conservation Plan and impacts would be similar.

Under both the proposed project and the No Project Alternative, future development could potentially affect special-status species, riparian habitats, wetlands, and wildlife movement corridors. Adherence to the General Plan goals, policies, and actions, as all federal, State, and local regulations relating to biological resources would fully mitigate any potential impacts. Therefore, the impact of the No Project Alternative would be similar when compared to the proposed project.

Future development under the proposed project could potentially affect wildlife movement corridors. The proposed project includes a new General Plan action to reduce effects to wildlife movement corridors by reducing bird strike impacts through designing development based on bird-safe design guidelines and best management practice strategies to reduce bird strikes. Therefore, impacts related to the movement of wildlife would be greater when compared to the proposed project.

Overall, impacts to biological resources from future development as allowed under the No Project Alternative would be slightly *greater* when compared to the proposed project.

#### 5.5.2.4 CULTURAL RESOURCES

As described in Chapter 4.4, *Cultural Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to cultural resources and no mitigation measures are required.

Under the No Project Alternative, new development would continue throughout the EIR Study Area under existing plans and regulations. As explained in Chapter 4.4 of this Draft EIR, the EIR Study Area contains existing prehistoric, architectural, historical, and archaeological resources that could be adversely affected by new demolition, inappropriate building modification, or incompatible new construction. Like the proposed project, the No Project Alternative would be subject to the same federal, State, and local regulations to reduce adverse effects to cultural resources, such as those in the Public Resources Code, California Health and Safety Code, and the California Code of Regulations. However, because less development would occur under the No Project Alternative, this alternative would involve a lessened potential to affect these resources when compared to the proposed project. Therefore, the No Project Alternative would have *lessened* impacts to cultural resources compared to the proposed project when following common protocols.

#### 5.5.2.5 ENERGY

As described in Chapter 4.5, *Energy*, of this Draft EIR, the proposed project would not result in any significant impacts related to energy and no mitigation measures are required.

All development in California is required to comply with building requirements in the California Green Building Code and Building and Energy Efficiency Standards, which ensure new development would not result in the wasteful or inefficient use of energy. Additionally, neither the proposed project nor the No Project Alternative would introduce a level of development and population growth that would be anticipated to necessitate the construction of new energy supply facilities or transmission infrastructure. Similar to the proposed project, the No Project Alternative would not contribute toward minimizing inefficient, wasteful, or unnecessary transportation energy consumption, and ensure compliance with State, regional, or local plans for renewable energy.

Less development would occur under the No Project Alternative, so energy consumption from construction would be reduced when compared to the proposed project. In addition, as shown in Appendix D, *Transportation Data*, of this Draft EIR, VMT per service population and VMT per employee would be higher under the proposed project than No Project Alternative conditions. Therefore, overall impacts related to energy use would be *lessened* under the No Project Alternative.

#### 5.5.2.6 GEOLOGY AND SOILS

As described in Chapter 4.6, *Geology and Soils*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to geology and soils and no mitigation measures are required.

Future development under both the proposed project and the No Project Alternative would be subject to the same federal, State, and local regulations that address and prevent hazards associated with geology, soils, and seismicity. However, because there would be less development under the No Project

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Alternative, fewer structures and people would be exposed to potential geologic hazards. Therefore, the No Project Alternative would result in *lessened* geological impacts than when compared to the proposed project.

### 5.5.2.7 GREENHOUSE GAS EMISSIONS

As described in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts concerning BAAQMD's significance criteria of meeting the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045, even with implementation of Mitigation Measure GHG-1.

New buildings constructed under both the proposed project and the No Project Alternative would be subject to the triennial updates to California's Building and Energy Efficiency Standards, which would presumably become more stringent over time. While new buildings would be more energy efficient, there would be an overall increase in energy usage under the proposed project from construction when compared to the No Project Alternative, due to the greater amount of proposed growth. Since the No Project Alternative would result in less development than the proposed project, greenhouse gas (GHG) emissions from construction and stationary sources use would be lessened under the No Project Alternative.

However, the current Climate Mitigation and Adaptation Plan (CMAP) demonstrates consistency with current legislative reduction targets for 2030 and not the carbon neutrality goal for 2045. Because Mitigation Measure GHG-1 to update the CMAP would not be implemented under the No Project Alternative, this alternative could produce a cumulatively considerable impact on GHG emissions.

In summary, the No Project Alternative would involve lessened emissions but a greater impact associated with consistency with the carbon neutrality goal for 2045. Therefore, overall impacts from GHG emissions under the No Project Alternative would be *similar* when compared to the proposed project.

### 5.5.2.8 HAZARDS AND HAZARDOUS MATERIALS

As described in Chapter 4.8, *Hazards and Hazardous Materials*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to hazards and hazardous materials and no mitigation measures are required.

Future development that could occur in the EIR Study Area from implementation of both the proposed project and the No Project Alternative would be required to comply with all federal, State, and local regulations pertaining to hazards and hazardous materials. Neither the proposed project nor the No Project Alternative would be expected to expose people to excessive airport-related noise, or to impair an emergency evacuation plan.

Overall, the No Project Alternative would have *similar* impacts when compared to the proposed project.



### 5.5.2.9 HYDROLOGY AND WATER QUALITY

As described in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, the proposed project would not result in any significant impacts related to hydrology and water quality and no mitigation measures are required. Compliance with existing State and local regulations and procedures would ensure that pre- and post-construction impacts to water quality would be less than significant.

Much like the proposed project, the No Project Alternative would connect to existing drainage systems already in place and would be subject to the same existing federal, State, and local regulations relating to hydrology and water quality. Due to the built-out nature of the EIR Study Area, under both the proposed project and the No Project Alternative, nearly all future development would occur within previously urbanized areas. Therefore, the No Project Alternative would have *similar* impacts to hydrology and water quality when compared to the proposed project.

### 5.5.2.10 LAND USE AND PLANNING

As described in Chapter 4.10, *Land Use and Planning*, of this Draft EIR, the proposed project would not result in any significant impacts related to land use and planning and no mitigation measures are required.

The existing General Plan 2030 was adopted with the purpose of harmonizing changes to existing developed areas to better serve community needs. Both the proposed project and the No Project Alternative would aim to improve connectivity and integrate infill development, and would not create physical barriers within existing communities. Accordingly, impacts related to division of an established community would be similar under both the proposed project and the No Project Alternative.

The No Project Alternative would continue to be subject to the current land use regulations that guide development in San Carlos and the general policy framework of the current 2030 General Plan. Additionally, the No Project Alternative would not conflict with the City's development standards currently in place. Similar to the proposed project, the No Project Alternative would have the majority of new housing in San Carlos on infill parcels near Downtown, along the El Camino Real corridor, along Old County Road between Holly Street and Terminal Avenue, and along East San Carlos Avenue. Most of the commercial growth is expected to occur in the Downtown area. Most of the office growth is expected in the Downtown and Northeast areas. Research and development and industrial growth would be limited to the east side area of San Carlos. Therefore, similar to the proposed project, the No Project Alternative would be compliant with San Mateo County Local Agency Formation Commission (LAFCo) regulations and achieve the same level of consistency with the intent of *Plan Bay Area 2050*, which provides a framework for future development in the Bay Area to meet the State's GHG and VMT reduction goals through the concentration of development in downtowns and centers near jobs and services. The No Project Alternative would not conflict with any applicable land use plans adopted for the purpose of avoiding or mitigating an environmental effect. Impacts under the No Project Alternative would be *similar* to the proposed project.

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### 5.5.2.11 NOISE

As described in Chapter 4.11, *Noise*, of this Draft EIR, the proposed project would not result in any significant impacts related to noise and no mitigation measures are required.

Because the No Project Alternative would result in less development, less construction would occur, and there would be lessened construction-related noise and vibration impacts. Future development allowed under the proposed project would be subject to the standards of the SCMC including basic noise regulations and certain performance standards. As specific uses are proposed for particular sites, project-level design, permitting, and/or environmental review would serve to ensure that individual uses would comply with the noise regulations. Similar to the proposed project, the No Project Alternative would continue to be subject to the current land use regulations that guide development in San Carlos and the general policy framework of the current 2030 General Plan. The proposed project includes modified General Plan policy language to reduce construction noise effects. Under the No Project Alternative, this modified language would not be adopted.

In addition, as shown in Appendix D, *Transportation Data*, of this Draft EIR, VMT per service population and VMT per employee would be higher under the proposed project than No Project Alternative conditions; therefore, traffic noise would be lower under the No Project Alternative than under the proposed project.

Overall impacts would be *similar* under the No Project Alternative when compared to the proposed project.

### 5.5.2.12 PARKS AND RECREATION

As discussed in Chapter 4.12, *Parks and Recreation*, of this Draft EIR, the proposed project would not result in any significant impacts related to parks and recreation, and no mitigation measures are required.

The No Project Alternative would result in fewer new residents and jobs compared to the proposed project and, therefore, would result in a lower level of demand for the parks and recreation areas that serve the EIR Study Area. Like the proposed project, future development under the No Project Alternative would be required to comply with all existing City regulations that require development to either provide parkland or pay in-lieu fees for the City to dedicate parkland elsewhere.

Neither the proposed project nor the No Project Alternative would be expected to result in deterioration of parks and recreation facilities; therefore, impacts under the No Project Alternative would be *similar* when compared to those of the proposed project.

### 5.5.2.13 POPULATION AND HOUSING

As described in Chapter 4.13, *Population and Housing*, of this Draft EIR, the proposed project would not result in any significant impacts related to population and housing, and no mitigation measures are required. The proposed project would not exceed the county-level projections in *Plan Bay Area 2050*.

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As shown in Table 5-1, *Development Projections for the Proposed Project and Project Alternatives*, the No Project Alternative is assumed to have a 2045 buildout of 21,560 housing units, 46,450 residents, 12,564,100 non-residential square footage, and 29,310 jobs. In comparison, Plan Bay Area 2050 projects an increase of 129,000 households and 114,000 jobs in San Mateo County by 2050.<sup>1</sup> The No Project Alternative would not exceed Plan Bay Area 2050 projections for households or jobs.

As under the proposed project, implementation of the No Project Alternative would result in a net increase in housing compared to existing conditions; therefore, it would not require replacement housing outside of the EIR Study Area. Potential impacts associated with displacement under the No Project Alternative would be similar when compared to those of the proposed project.

Overall, impacts related to population and housing would be *similar* when compared to the proposed project.

**5.5.2.14 PUBLIC SERVICES**

As described in Chapter 4.14, *Public Services*, of this Draft EIR, impacts under the proposed project to public services were found to be less than significant, and no mitigation measures are required.

Future development under the No Project Alternative would be required to comply with all existing City regulations and the general policy framework of the current 2030 General Plan. The No Project Alternative would result in fewer new residents and jobs in the EIR Study Area, and, therefore, would result in a lower level of demand for the public service providers that serve the EIR Study Area. However, neither the proposed project nor the No Project Alternative would be expected to result in deterioration of public service facilities. Therefore, impacts under the No Project Alternative would be *similar* when compared to those of the proposed project.

**5.5.2.15 TRANSPORTATION**

As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts even with implementation of Mitigation Measure TRAN-2.

Like the proposed project, the No Project Alternative would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities or result in inadequate emergency access. The No Project Alternative would be subject to the same federal, State, and local City design standards as the proposed project to ensure that future development does not increase hazards due to a geometric design feature or incompatible uses, and that development provides adequate emergency access. Therefore, the No Project Alternative would have a similar impact when compared to the proposed project in this regard.

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<sup>1</sup> Plan Bay Area 2050, 2021 January, Projected Household and job Growth, by County, [https://planbayarea.org/sites/default/files/FinalBlueprintRelease\\_December2020\\_GrowthPattern\\_Jan2021Update.pdf](https://planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPattern_Jan2021Update.pdf), accessed on October 17, 2024

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As discussed in Section 5.5.2.2, *Air Quality*, VMT per service population and VMT per employee would be higher under the proposed project than No Project Alternative conditions. The proposed project would have a significant and unavoidable cumulative impact due to the proposed project increasing the total countywide VMT. However, the No Project Alternative would not increase the countywide VMT compared to cumulative No Project conditions. Therefore, it is expected that the No Project Alternative would result in lessened VMT impacts when compared to the proposed project.

In summary, overall impacts from transportation under the No Project Alternative would be *lessened* when compared to the proposed project.

### 5.5.2.16 TRIBAL CULTURAL RESOURCES

As described in Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to tribal cultural resources and no mitigation measures are required.

As under the proposed project, existing archaeological resources, including Native American artifacts and human remains, present in the EIR Study Area, could be affected by construction activities under the No Project Alternative. Like the proposed project, the No Project Alternative would be subject to the same federal and State regulations to mitigate impacts to tribal cultural resources, such as those in the Public Resources Code, California Health and Safety Code, and the California Code of Regulations. Because less development would occur under the No Project Alternative, the potential to impact these resources during construction would be lessened when compared to the proposed project. However, the proposed project includes modified General Plan policies to reduce effects to tribal cultural resources; these modified policies would not be adopted under the No Project Alternative.

Overall, the No Project Alternative would have *greater* impacts to tribal cultural resources as compared to the proposed project when following common protocols.

### 5.5.2.17 UTILITIES AND SERVICE SYSTEMS

As described in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, impacts to water, wastewater, solid waste, stormwater, and energy infrastructure under the proposed project were found to be less than significant with the compliance of all applicable regulations. No mitigation measures are required.

Demand and consumption trends generally demonstrate that advances in recycling and solid waste reduction requirements, water-efficient regulations in building and landscaping, and stricter stormwater retention requirements would reduce utility and service systems demands from existing conditions, or result in more efficient use of utilities. These trends would continue under both the proposed project and the No Project Alternative. Much like the proposed project, the No Project Alternative would connect to existing systems already in place and would be subject to the same existing federal, State, and local regulations related to utility usage.

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Neither the proposed project nor the No Project Alternative would be expected to result in utilities impacts; therefore, impacts under the No Project Alternative would be *similar* when compared to the proposed project.

**5.5.2.18 WILDFIRE**

As described in Chapter 4.18, *Wildfire*, of this Draft EIR, the proposed project would result in significant and unavoidable project-level and cumulative impacts due to development under the proposed project increasing population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.

Although the goals, policies, and actions identified in the proposed 2045 General Plan Reset provide the best wildfire hazard reduction measures available, Very High Fire Severity Zones (VHFSZs) are in the western portions of the EIR Study Area, which also coincide with the hillside and landslide prone areas of the EIR Study Area. Additionally, there are Wildland Urban Interface (WUI) areas within the EIR Study Area. Prohibiting new development in this portion of the EIR Study Area is not feasible or practical because the City has a responsibility to meet other, conflicting obligations, including increasing the number and type of housing available and allowing reconstruction of homes burned by wildfires. While the No Project Alternative would result in less development, development would still occur in the VHFSZ and/or the WUI. Therefore, implementation of the No Project Alternative would have *similar* impacts when compared to the proposed project.

**5.5.3 RELATIONSHIP OF THE ALTERNATIVES TO THE OBJECTIVES**

As listed in Section 5.2, *Project Objectives*, the primary purpose of the proposed project is to plan for the growth of San Carlos over a 20-year time horizon. This requires extending the buildout horizon to year 2045 and updating certain goals, policies, and actions so that they meet current State requirements and community priorities. The objectives also include allowing a mix of development; preserving, protecting, and promoting industrial, commercial, and office uses; providing a mix of housing that meets the needs of a diverse community, as outlined in the 2023-2031 Housing Element and for future Housing Element cycles; and minor updates to Update the 2030 General Plan to reference recent City initiatives, plans or new State regulations.

Under the No Project Alternative, the proposed project would not be implemented, and the certain proposed goals, policies, and actions intended to address the objectives would not be adopted. Therefore, this alternative would not fully accomplish any of the project objectives.

**5.6 REDUCED NON-RESIDENTIAL BUILDOUT ALTERNATIVE****5.6.1 DESCRIPTION**

This alternative includes full buildout of development projects already in the pipeline plus 50 percent of the remaining non-residential buildout included in the proposed project. The Reduced Non-Residential

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Buildout Alternative would involve the same proposed General Plan goals, policies, and actions that would occur under the proposed project.

The alternatives analysis assumes that all applicable mitigation measures and General Plan policy amendments recommended for the proposed project would apply to the Reduced Non-Residential Buildout Alternative.

Buildout projections for the Reduced Non-Residential Buildout Alternative are shown in Table 5-4, *Development Projections Under the Reduced Non-Residential Buildout Alternative*. The Reduced Non-Residential Buildout Alternative assumes development of projects already in the development pipeline only and half of the additional non-residential growth associated with the adoption of the Downtown Specific Plan (DTSP) and the Northeast Area specific Plan (NEASP). Overall residential growth would be the same as under the proposed project.

**TABLE 5-4 DEVELOPMENT PROJECTIONS UNDER THE REDUCED NON-RESIDENTIAL BUILDOUT ALTERNATIVE**

Category	Existing Conditions (2024)			Projected Net Change (2024-2045)			2045 General Plan Reset Buildout (2045)		
	City	SOI	Total	City	SOI	Total	City	SOI	Total
Housing Units	12,460	790	<b>13,250</b>	8,300	0	<b>8,300</b>	20,770	790	<b>21,560</b>
Population	28,890	1,940	<b>30,830</b>	15,620	0	<b>15,620</b>	44,510	1,940	<b>46,450</b>
Non-Residential Square Footage <sup>a</sup>	9,776,200	100,000	<b>9,876,200</b>	5,807,580	0	<b>5,807,580</b>	15,583,780	100,000	<b>15,683,780</b>
Jobs <sup>b</sup>	20,410	370	<b>20,780</b>	17,530	0	<b>17,530</b>	37,940	370	<b>38,310</b>

Notes: SOI = sphere of influence

a. Non-residential square footage includes commercial, office, research and development (R&D), and industrial square footage and does not include public uses.

b. Job numbers include commercial, office, R&D, industrial, and other jobs, including public jobs.

Source: PlaceWorks, 2024.

## 5.6.2 IMPACT DISCUSSION

The potential environmental impacts associated with the Reduced Non-Residential Buildout Alternative when compared to the proposed project are described herein.

### 5.6.2.1 AESTHETICS

As described in Chapter 4.1, *Aesthetics*, of this Draft EIR, the proposed project would not result in any significant impacts related to aesthetics and no mitigation measures are required.

As under the proposed project, future development under the Reduced Non-Residential Buildout Alternative would be anticipated to occur in developed areas where there would be less of an impact on

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scenic vistas. Furthermore, there are no officially designated scenic view corridors, vistas, or State-designated scenic highways within, or in the vicinity of, the EIR Study Area. Like the proposed project, applicable future projects under the Reduced Non-Residential Buildout Alternative would be subject to design review and compliance with the various planning documents that govern scenic quality in the city, as described in Section 4.1.1.1, *Regulatory Framework*, in Chapter 4.1. Therefore, overall impacts to scenic corridors, vistas, and highways would be similar under both the proposed project and the Reduced Non-Residential Buildout Alternative.

The Reduced Non-Residential Buildout Alternative, like the proposed project, would be required to comply with best management practices in CALGreen and SCMC provisions that ensure new land uses do not generate excessive light levels and that future development reduce light and glare spillover to surrounding land uses. Therefore, impacts from light and glare under the Reduced Non-Residential Buildout Alternative would be similar when compared to the proposed project.

The Reduced Non-Residential Buildout Alternative would not propose any changes from the proposed project that would affect aesthetic impacts. Therefore, the Reduced Non-Residential Buildout Alternative would result in *similar* aesthetics impacts when compared to the proposed project.

### **5.6.2.2 AIR QUALITY**

As described in Chapter 4.2, *Air Quality*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts during the construction and operational phases even with implementation of Mitigation Measures AQ-2.1, AQ-2.2, and AQ-3.

Similar to the proposed project, the Reduced Non-Residential Buildout Alternative would not conflict with the 2017 Clean Air Plan and would not hinder BAAQMD from implementing the control measures in the 2017 Clean Air Plan. Additionally, like the proposed project, the Reduced Non-Residential Buildout Alternative would not generate any substantial odor.

Development under both the proposed project and the Reduced Non-Residential Buildout Alternative would be subject to BAAQMD's basic control measures for fugitive dust control and screening sizes. Additionally, future development under both the proposed project and the Reduced Non-Residential Buildout Alternative could result in construction activities within 1,000 feet of residential and other sensitive land uses, thus, temporarily elevating concentrations of toxic air contaminants and diesel particulate matter in the vicinity of sensitive land uses. While future development under the Reduced Non-Residential Buildout Alternative would be subject to the same regulations as the proposed project to mitigate construction impacts, less development—and thus reduced emission levels—would occur under the Reduced Non-Residential Buildout Alternative; therefore, construction air quality impacts would be lessened when compared to the proposed project.

Under the Reduced Non-Residential Buildout Alternative, reduced non-residential development would occur compared to the proposed project; therefore, reduced direct and indirect criteria air pollutant emissions from energy (e.g., natural gas use) and area sources (e.g., aerosols and landscaping equipment) would occur. Under both the proposed project and the Reduced Non-Residential Buildout

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Alternative, subsequent environmental review of applicable development projects would be required to assess potential impacts under BAAQMD's project-level thresholds.

Because the Reduced Non-Residential Buildout Alternative would reduce the amount of non-residential development compared to the proposed project, there would also be a reduction of number of jobs in the EIR Study Area. Despite this reduction, the Reduced Non-Residential Development Alternative is not expected to reduce overall VMT as work-related trips may be displaced elsewhere in the region and local residents may need to commute farther to work.

Overall, because the Reduced Non-Residential Buildout Alternative would result in reduced building construction and operational air quality effects, impacts under the Reduced Non-Residential Buildout Alternative would be *lessened* when compared to the proposed project.

### 5.6.2.3 BIOLOGICAL RESOURCES

As described in Chapter 4.3, *Biological Resources*, of this Draft EIR, the proposed project would not result in any significant impacts related to biological resources and no mitigation measures are required.

The EIR Study Area is not within any local, regional, or State habitat conservation plan areas. Therefore, neither the proposed project nor the Reduced Non-Residential Buildout Alternative would conflict with the conservation strategy in any Habitat Conservation Plan or Natural Community Conservation Plan and impacts would be similar.

Under both the proposed project and the Reduced Non-Residential Buildout Alternative future development could potentially affect special-status species, riparian habitats, wetlands, and wildlife movement corridors. Adherence to the General Plan goals, policies, and actions, as all federal, State, and local regulations relating to biological resources would fully mitigate any potential impacts. While the Reduced Non-Residential Buildout Alternative would result in less non-residential development, development under both the proposed project and this alternative would be concentrated in infill development sites. Therefore, impact would be similar in this regard.

Due to the built-out nature of the EIR Study Area, under both the proposed project and the Reduced Non-Residential Buildout Alternative, new development would be concentrated in infill development sites and the Reduced Non-Residential Buildout Alternative would have a *similar* level of impact as the proposed project.

### 5.6.2.4 CULTURAL RESOURCES

As described in Chapter 4.4, *Cultural Tribal Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to cultural resources and no mitigation measures are required.

As explained in Chapter 4.4 of this Draft EIR, there are existing prehistoric, architectural, historical, and archaeological resources in the EIR Study Area that could be adversely affected by new demolition, inappropriate building modification, or incompatible new construction. Like the proposed project, the Reduced Non-Residential Buildout Alternative would be subject to the same federal, State, and local



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regulations to mitigate impacts to cultural resources, such as those in the Public Resources Code, California Health and Safety Code, and the California Code of Regulations. However, because the Reduced Non-Residential Buildout Alternative would involve less growth than under the proposed project, a lower number of cultural resources would have the potential to be affected by construction activities. Therefore, the Reduced Non-Residential Buildout Alternative would have slightly *lessened* impacts to cultural resources compared to the proposed project when following common protocols.

### **5.6.2.5 ENERGY**

As described in Chapter 4.5, *Energy*, of this Draft EIR, the proposed project would not result in any significant impacts related to energy and no mitigation measures are required.

All development that occurs in the State is required to comply with best management practices regulated in the California Green Building Code and Building and Energy Efficiency Standards, which ensure new development would not result in the wasteful or inefficient use of energy. Additionally, neither the proposed project nor the Reduced Non-Residential Buildout Alternative would introduce a level of development and population growth that would be anticipated to necessitate the construction of new energy supply facilities or transmission infrastructure. Similar to the proposed project, the Reduced Non-Residential Buildout Alternative would not contribute toward minimizing inefficient, wasteful, or unnecessary transportation energy consumption, and ensure compliance with State, regional, or local plans for renewable energy.

A reduced amount of development would occur under the Reduced Non-Residential Buildout Alternative, so energy consumption from construction would be less when compared to the proposed project.

Overall, energy-related impacts would be *similar* under the Reduced Non-Residential Buildout Alternative when compared to the proposed project.

### **5.6.2.6 GEOLOGY AND SOILS**

As described in Chapter 4.6, *Geology and Soils*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to geology and soils and no mitigation measures are required.

Future development under both the proposed project and the Reduced Non-Residential Buildout Alternative would be subject to the same federal, State, and local regulations that address and prevent hazards associated with geology, soils, and seismicity. However, the Reduced Non-Residential Buildout Alternative would result in a smaller amount of non-residential development compared to the proposed project. Therefore, the Reduced Non-Residential Buildout Alternative would have lessened impacts than the proposed project and fewer structures and people would be exposed to potential geologic hazards. Therefore, geological impacts of the Reduced Non-Residential Buildout Alternative would be *lessened* when compared to the proposed project.

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### 5.6.2.7 GREENHOUSE GAS EMISSIONS

As described in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts concerning BAAQMD's significance criteria of meeting the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045 even with implementation of Mitigation Measure GHG-1.

New buildings constructed under both the proposed project and the Reduced Non-Residential Buildout Alternative would be subject to the triennial updates to California's Building and Energy Efficiency Standards, which would presumably become more stringent over time. The Reduced Non-Residential Buildout Alternative would result in less non-residential development, and therefore reduced greenhouse gas emissions from reduced building energy usage.

Despite the reduction in non-residential development and local employment, the Reduced Non-Residential Development Alternative is not expected to reduce overall VMT as work-related trips may be displaced elsewhere in the region and local residents may need to commute farther to work. Therefore, this alternative would not reduce GHG emissions associated with vehicle traffic.

The current CMAP demonstrates consistency with current legislative reduction targets for 2030 and not the carbon neutrality goal for 2045. Under this alternative, Mitigation Measure GHG-1 to update the CMAP would be implemented, as under the proposed project.

Overall, impacts under the Reduced Non-Residential Buildout Alternative would be slightly *lessened* compared to those proposed project due to the reduced emissions from building construction and operation.

### 5.6.2.8 HAZARDS AND HAZARDOUS MATERIALS

As described in Chapter 4.8, *Hazards and Hazardous Materials*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to hazards and hazardous materials and no mitigation measures are required.

Future development that could occur in the EIR Study Area from implementation of both the proposed project and the Reduced Non-Residential Buildout Alternative would be required to comply with all federal, State, and local regulations pertaining to hazards and hazardous materials. Neither the proposed project nor the Reduced Non-Residential Buildout Alternative would be expected to expose people to excessive airport-related noise, or to impair an emergency evacuation plan.

Overall, the Reduced Non-Residential Buildout Alternative would have *similar* impacts when compared to the proposed project.

### 5.6.2.9 HYDROLOGY AND WATER QUALITY

As described in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, the proposed project would not result in any significant impacts related to hydrology and water quality and no mitigation measures

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are required. Compliance with existing State and local regulations and procedures would ensure that pre- and post-construction impacts to water quality would be less than significant.

Similar to the proposed project, future development under the Reduced Non-Residential Buildout Alternative would occur within previously urbanized areas and connect to existing drainage systems already in place. The Reduced Non-Residential Buildout Alternative would be subject to the same existing federal, State, and local regulations relating to hydrology and water quality as the proposed project. Therefore, hydrology and water quality impacts would be *similar* to those of the proposed project.

### **5.6.2.10 LAND USE AND PLANNING**

As described in Chapter 4.10, *Land Use and Planning*, of this Draft EIR, the proposed project would not result in any significant impacts related to land use and planning and no mitigation measures are required.

The Reduced Non-Residential Buildout Alternative would involve a reduced growth in comparison to the proposed project. Both the proposed project and the Reduced Non-Residential Buildout Alternative would aim to improve connectivity and integrate infill development, and they would not create physical barriers within existing communities. Accordingly, impacts related to the division of an established community would be similar under both the proposed project and the Non-Residential Buildout Alternative.

Under the Non-Residential Buildout Alternative, the majority of new housing in San Carlos is expected on infill parcels near Downtown, along the El Camino Real corridor, along Old County Road between Holly Street and Terminal Avenue, and along East San Carlos Avenue. Most of the commercial growth is expected to occur in the Downtown area. Most of the office growth is expected in the Downtown and Northeast areas. Research and development and industrial growth would be limited to the east side area of San Carlos. Therefore, similar to the proposed project, the Non-Residential Buildout Alternative would be compliant with San Mateo County LAFCo regulations and achieve the same level of consistency with the intent of *Plan Bay Area 2050*, which provides a framework for future development in the Bay Area to meet the State's GHG and VMT reduction goals through the concentration of development in downtowns and centers near jobs and services. Implementation of the Non-Residential Buildout Alternative would not conflict with any applicable land use plans adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, overall land use and planning impacts under the Non-Residential Buildout Alternative would be *similar* when compared to the proposed project.

### **5.5.2.11 NOISE**

As described in Chapter 4.11, *Noise*, of this Draft EIR, the proposed project would not result in any significant impacts related to noise and no mitigation measures are required.

Future development allowed under the proposed project would be subject to the standards of the SCMC including basic noise regulations and certain performance standards. As specific uses are proposed for particular sites, project-level design, permitting, and/or environmental review would serve to ensure

## ALTERNATIVES

that individual uses would comply with the noise regulations. Similar to the proposed project, the Non-Residential Buildout Alternative would be subject to the current land use regulations that guide development in San Carlos and the General Plan goals, policies, and actions regulating noise, including the modified policy language involved in the proposed project. However, because the Non-Residential Buildout Alternative would result in less development, less construction would occur, and there would be lessened construction-related noise and vibration impacts.

Despite the reduction in non-residential development, the Reduced Non-Residential Development Alternative is not expected to reduce the project's contribution to traffic noise levels as work-related trips may be displaced elsewhere in the region and local residents may need to commute farther to work.

Overall, noise impacts under the Non-Residential Buildout Alternative would be *lessened* when compared to the proposed project due to the reduced amount of construction activities.

### 5.6.2.12 PARKS AND RECREATION

As discussed in Chapter 4.12, *Parks and Recreation*, of this Draft EIR, the proposed project would not result in any significant impacts related to parks and recreation, and no mitigation measures are required.

While the Reduced Non-Residential Buildout Alternative would have less non-residential growth than the proposed project, the amount of residential growth would be the same. Like the proposed project, future development under the Reduced Non-Residential Buildout Alternative would be required to comply with all existing City regulations adopted to ensure that development either provides parkland or pay in-lieu fees for the City to dedicate parkland elsewhere.

Neither the proposed project nor the Reduced Non-Residential Buildout Alternative would be expected to result in deterioration of parks and recreation facilities. Therefore, impacts under the Reduced Non-Residential Buildout Alternative would be *similar* when compared to the proposed project.

### 5.6.2.13 POPULATION AND HOUSING

As described in Chapter 4.13, *Population and Housing*, of this Draft EIR, the proposed project would not result in any significant impacts related to population and housing, and no mitigation measures are required. The proposed project would not exceed the county-level projections in *Plan Bay Area 2050*.

While the Reduced Non-Residential Buildout Alternative would involve a reduced non-residential growth and a lower number of jobs compared to the proposed project, population growth is expected to be the same. Therefore, impacts would be similar when compared to those of the proposed project.

As under the proposed project, implementation of the Reduced Non-Residential Buildout Alternative would result in a net increase in housing compared to existing conditions; therefore, it would not require replacement housing outside of the EIR Study Area. Therefore, potential impacts associated with

## ALTERNATIVES

displacement under the Reduced Non-Residential Buildout Alternative would be similar when compared to those of the proposed project.

In summary, the Reduced Non-Residential Buildout Alternative would result in *similar* impacts related to population and housing when compared to the proposed project.

### 5.6.2.14 PUBLIC SERVICES

As described in Chapter 4.14, *Public Services*, of this Draft EIR, impacts under the proposed project to public services were found to be less than significant, and no mitigation measures are required.

Future development under the Reduced Non-Residential Buildout Alternative would be required to comply with all existing City regulations adopted to ensure that development pays its fair share of the cost of delivering services and providing libraries, while payment of property taxes would ensure that future development pays its fair share towards schools. While the Reduced Non-Residential Buildout Alternative would involve a reduced non-residential growth when compared to the proposed project, the amount of residential growth would be the same and would not increase demand on public service providers.

Neither the proposed project nor the Reduced Non-Residential Buildout Alternative would be expected to result in deterioration of public service facilities. Therefore, impacts under the No Project Alternative would be *similar* when compared to those of the proposed project.

### 5.6.2.15 TRANSPORTATION

As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts even with implementation of Mitigation Measure TRAN-2.

Like the proposed project, the Reduced Non-Residential Buildout Alternative would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities or result in inadequate emergency access. The Reduced Non-Residential Buildout Alternative would be subject to the same federal, State, and local City design standards as the proposed project to ensure that future development does not increase hazards due to a geometric design feature or incompatible uses, and that development provides adequate emergency access. Therefore, the Reduced Non-Residential Buildout Alternative would have a similar impact when compared to the proposed project in this regard.

Much like the proposed project, the Reduced Non-Residential Buildout Alternative would have the same population and housing units as the proposed project. The differences between the proposed project and the Reduced Non-Residential Buildout Alternative are the lower number of jobs and the reduced amount of non-residential square footage. Despite this reduction, the Reduced Non-Residential Development Alternative is not expected to reduce overall VMT as work-related trips may be displaced elsewhere in the region and local residents may need to commute farther to work. Therefore, the Reduced Non-Residential Buildout Alternative would result in *similar* transportation impacts when compared to the proposed project.

## ALTERNATIVES

### 5.6.2.16 TRIBAL CULTURAL RESOURCES

As described in Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to tribal cultural resources and no mitigation measures are required.

The Reduced Non-Residential Buildout Alternative would involve less non-residential development than would occur under the proposed project. As under the proposed project, existing archaeological resources, including Native American artifacts and human remains, present in the EIR Study Area, could be affected by construction activities under the Reduced Non-Residential Buildout Alternative. Like the proposed project, the Reduced Non-Residential Buildout Alternative would be subject to the same federal, State, and local regulations to mitigate impacts to tribal cultural resources, such as those in the Public Resources Code, California Health and Safety Code, and the California Code of Regulations. This alternative would also include the proposed project's modified General Plan language to reduce effects to tribal cultural resources.

Overall, due to the Reduced Non-Residential Buildout Alternative having less overall development, there would be less construction activity and a reduced chance of existing archaeological resources, including Native American artifacts and human remains being affected. Therefore, the Reduced Non-Residential Buildout Alternative would have *lessened* impacts to tribal cultural resources as compared to the proposed project when following common protocols.

### 5.6.2.17 UTILITIES AND SERVICE SYSTEMS

As described in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, impacts to water, wastewater, solid waste, stormwater, and energy infrastructure under the proposed project were found to be less than significant with the compliance of all applicable regulations. No mitigation measures are required.

Demand and consumption trends demonstrate that advances in recycling and solid waste reduction requirements, water-efficient regulations in building and landscaping, and stricter stormwater retention requirements would reduce utility and service systems demands from existing conditions, resulting in a more efficient use of utilities.

Neither the proposed project nor the Reduced Non-Residential Buildout Alternative would be expected to result in utilities impacts; therefore, impacts under this alternative would be *similar* when compared to the proposed project.

### 5.6.2.18 WILDFIRE

As described in Chapter 4.18, *Wildfire*, of this Draft EIR, the proposed project would result in significant and unavoidable project-level and cumulative impacts due to development under the proposed project increasing population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.

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**ALTERNATIVES**

While the Reduced Non-Residential Buildout Alternative would involve less growth than the proposed project, similar to the proposed project, the Reduced Non-Residential Buildout Alternative would continue to increase population, buildings, and infrastructure in wildfire-prone areas. Prohibiting new development in the Very High FHSZ and WUI areas of the EIR Study Area is not feasible or practical because the City has a responsibility to meet other, conflicting obligations, including increasing the number and type of housing available and allowing reconstruction of homes burned by wildfires. Therefore, the Reduced Non-Residential Buildout Alternative would have *similar* wildfire impacts as the proposed project.

### 5.6.3 RELATIONSHIP OF THE ALTERNATIVES TO THE OBJECTIVES

The Reduced Non-Residential Buildout Alternative would involve the same proposed goals, policies, and actions of the proposed project intended to address the project objectives. In addition, this alternative would reduce the amount of non-residential square footage that would occur during the buildout horizon of the proposed project. Therefore, the Reduced Non-Residential Buildout Alternative would not fully achieve the following project objectives:

- Allow for a mix of development to support the City's economic resiliency and to sustain a robust local economy.
- Preserve, protect, and promote industrial, commercial, and office uses to maintain a thriving ecosystem of local businesses and to provide for local jobs.

## 5.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the proposed project and the alternatives, Section 15126.6 of the CEQA Guidelines requires that an “environmentally superior” alternative be selected and the reasons for such a selection be disclosed. In general, the environmentally superior alternative is the alternative to the proposed project that would be expected to generate the least number of significant impacts. Identification of the environmentally superior alternative is an informational procedure and the alternative to the proposed project selected may not be the alternative to the proposed project that best meets the goals or needs of San Carlos. Because CEQA Guidelines Section 15126.6(c) requires an evaluation of a reasonable range of alternatives to the proposed project, the proposed project under consideration cannot be identified as the environmentally superior alternative. Additionally, in accordance with CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

As shown in Table 5-2, *Comparison of Impacts of the Proposed Project and Project Alternatives*, the Reduced Non-Residential Buildout Alternative would, in comparison to the proposed project, result in lessened environmental impacts related to air quality, cultural resources, geology and soils, GHG emissions, noise, and tribal cultural resources, and would not result in greater impacts for any resource categories. Therefore, as shown in Table 5-2, the Reduced Non-Residential Buildout Alternative would be the environmentally superior alternative.

## **ALTERNATIVES**

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## 6. CEQA-Required Assessment Conclusions

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This chapter provides an overview of the impacts of the proposed project based on the analyses presented in Chapter 4, *Environmental Analysis*, and its subchapters 4.1 through 4.18 of this Draft Environmental Impact Report (EIR). The topics covered in this chapter include impacts found not to be significant, growth-inducing impacts, and significant irreversible changes to the environment. For a more detailed analysis of the proposed project's environmental effects and the proposed mitigation measures to minimize significant impacts, see Chapter 4 and its subchapters 4.1 through 4.18 of this Draft EIR.

### 6.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Section 15126.2(b) of the California Environmental Quality Act (CEQA) Guidelines requires that “direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short- and long-term effects.” Chapter 1, *Executive Summary*, contains Table 1-1, *Summary of Significant Impacts and Mitigation Measures*, which summarizes the significant impacts, mitigation measures, and levels of significance with and without mitigation. While actions from the proposed project and mitigation measures, where feasible, would reduce the level of impact to less than significant, the following impacts would remain significant and unavoidable after mitigation measures are applied. The identification of these program-level impacts does not preclude the finding of less-than-significant impacts for subsequent projects analyzed at the project level that do not exceed the thresholds of significance. As detailed in Chapters 4.2, *Air Quality*, Chapter 4.7, *Greenhouse Gas Emissions*, Chapter 4.15, *Transportation*, and Chapter 4.18, *Wildfire*, of this Draft EIR, environmental impacts associated with the proposed project were found to be significant and unavoidable, as listed:

#### Air Quality

- **Impact AQ-2.1:** Construction of development projects within the buildout horizon of the proposed project would generate emissions that would exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds and cumulative contribute to the nonattainment designations of the San Francisco Bay Area Air Basin.
- **Impact AQ-2.2:** Operation of development projects under the proposed project could generate operational emissions that exceed the Bay Area Air Quality Management District's (BAAQMD) regional significance thresholds for volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>).
- **Impact AQ-3:** Construction emissions associated with future development projects could expose air quality-sensitive receptors to substantial toxic air contaminant concentrations and exceed the Bay Area Air Quality Management District's (BAAQMD) project-level and cumulative significance thresholds.

## CEQA-REQUIRED ASSESSMENT CONCLUSIONS

### Greenhouse Gas Emissions

- **Impact GHG-1:** Implementation of the proposed project would exceed the greenhouse (GHG) emissions threshold of no net increase from existing conditions and would therefore not make substantial progress toward the long-term GHG reduction goal under Senate Bill (SB) 32 or the carbon neutrality goal under Assembly Bill (AB) 1279.

### Transportation

- **Impact TRAN-2:** The proposed project could exceed the City's VMT significance criteria by generating VMT per service population, per capita, and per employee that exceeds a threshold of 15 percent less than the regional average and by increasing total countywide VMT.

### Wildfire

- **Impact WILD-2:** Future development during the buildout horizon of the proposed project could increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.
- **Impact WILD-5:** Future development during the buildout horizon of the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas, Very High Fire Hazard Severity Zones (FHSZ), or Wildland-Urban Interface (WUI), result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.

## 6.2 IMPACTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the State CEQA Guidelines states:

*An EIR shall 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 EIR.*

Development of the proposed project would not result in significant environmental impacts to the environmental impact topics listed below and therefore, are not discussed in detail in Chapters 4.1 through 4.18 of this Draft EIR.

### 6.2.1 AGRICULTURE AND FORESTRY RESOURCES

Maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency categorize most land in San Carlos as Urban and Built-Up Land.<sup>1</sup> There are no agricultural lands classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance in the City of San

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<sup>1</sup> California Department of Conservation, 2022, California Important Farmland Finder, <https://maps.conservation.ca.gov/DLRP/CIFF/>, accessed October 21, 2024.

## CEQA-REQUIRED ASSESSMENT CONCLUSIONS

Carlos. There are no lands under a Williamson Act Contract within San Carlos, and there are no agricultural land uses adjoining the EIR Study Area.<sup>2</sup> Therefore, approval and implementation of the proposed project would not conflict with lands under Williamson Act contract. For these reasons, there would be no impacts to agricultural or forestry resources under CEQA, and no mitigation would be required.

### 6.2.2 MINERAL RESOURCES

The California Department of Conservation, Geological Survey classifies lands into Aggregate and Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act of 1974. These MRZs identify whether known or inferred significant mineral resources are present in areas and are defined as follows:<sup>3</sup>

- MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it's judged that little likelihood exists for their presence.
- MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.
- MRZ-3: Areas containing mineral deposits the significance of which cannot be evaluated from available data
- MRZ-4: Areas where available information is inadequate for assignment to any other MRZ zone.

According to the California Department of Conservation, State Mining Geology Board, there are no known significant mineral resources within the EIR Study Area. A majority of San Carlos is categorized as MRZ-1, with some MRZ-3 and MRZ-4 areas near the south of the EIR Study Area.<sup>4</sup> Although further exploration within the EIR Study Area could result in the reclassification of specific localities, no mineral resources have been historically exploited or are being currently exploited commercially within the EIR Study Area. As such, these standards have been screened out from further evaluation. Consequently, there would be no impacts to mineral resources as a result of adoption and implementation of the proposed project.

### 6.3 GROWTH INDUCEMENT

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Typical growth-inducing factors might be the extension of urban services or transportation infrastructure to a previously unserved or under-served area, or the removal of major barriers to development.

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<sup>2</sup> County of San Mateo, 2022, Williamson Act Parcels, <https://data.smcgov.org/Housing-Development/Williamson-Act-Parcels/sq6e-7j5j#revert>, accessed October 21, 2024.

<sup>3</sup> California Department of Conservation, State Mining and Geology Board and Division of Mines and Geology, *Guidelines for Classification and Designation of Mineral Lands*, <https://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf>, accessed October 21, 2024.

<sup>4</sup> California Department of Conservation, 1996, Open Fire Report 96-03 Plate 1 out of 29, accessed on October 21, 2024.

## CEQA-REQUIRED ASSESSMENT CONCLUSIONS

This section evaluates the proposed project's potential to create such growth inducements. As CEQA Guidelines Section 15126.2(d) requires, "[it] must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment." In other words, negative impacts associated with growth inducement occur only where the projected growth would cause significant adverse environmental impacts.

Growth-inducing impacts fall into two general categories: direct or indirect. Direct growth-inducing impacts are generally associated with providing urban services to an undeveloped area. Indirect, or secondary growth-inducing impacts consist of growth induced in the region by additional demands for housing, goods, and services associated with the population increase caused by, or attracted to, a new project.

Further, while implementation of the proposed project would induce growth, as discussed in detail in Chapter 4.13, *Population and Housing*, of this Draft EIR, the proposed project would be consistent with the regional planning objectives established for the Bay Area. The project itself implements goals, policies, and actions to accommodate the projected development and is within the jobs and household forecast for the San Mateo County region within *Plan Bay Area 2050*, as described in Chapter 4.13, *Population and Housing*. Additionally, this additional growth would come incrementally over a period of approximately 20 years and a policy framework is in place to ensure adequate planning occurs to accommodate it. The proposed project would result in a mix of development types concentrated in areas of the EIR Study Area that are near transportation facilities and existing employment centers. In addition, future development would implement energy and water conservation requirements related to existing and new development, thereby minimizing consumption of non-renewable resources to the extent practicable.

### 6.3.1 DIRECT IMPACTS

The proposed project is a plan-level document and does not propose any specific development; however, implementation of the proposed project would induce growth by increasing the development potential in the EIR Study Area, as shown in Table 3-1, *Proposed 2045 General Plan Reset Buildout Projections in the EIR Study Area*, in Chapter 3, *Project Description*. As shown in Table 3-1, the 2045 forecast for the EIR Study Area is approximately 46,450 total population, 21,560 housing units, 18,803,500 non-residential square footage, and 47,320 jobs. State law requires the City to promote the production of housing to meet its fair share of the regional housing needs distribution made by ABAG. The proposed 2045 General Plan Reset would result in regional benefits by planning for future development that encourages less automobile dependence, which could have associated air quality and greenhouse gas (GHG) benefits. Encouraging infill growth in designated areas would help to reduce development pressures on lands outside the city limit.

### 6.3.2 INDIRECT IMPACTS

The proposed project could be considered growth inducing because it includes policies and actions that encourage new growth in the urbanized areas of San Carlos. Housing development in these areas would consist of on infill parcels near Downtown, along the El Camino Real corridor, along Old County Road

## CEQA-REQUIRED ASSESSMENT CONCLUSIONS

between Holly Street and Terminal Avenue, and along East San Carlos Avenue. Most of the commercial growth is expected to occur in the Downtown area. Most of the office growth is expected in the Downtown and Northeast areas. Research and development and industrial growth would be limited to the east side area of San Carlos. However, infrastructure is already in place in these areas and future development would be required to comply with the City's General Plan, zoning regulations, and standards for public services and utilities. Secondary effects associated with this growth do not represent a new significant environmental impact that has not already been addressed in the individual resource chapters of this EIR. Additionally, population and employment growth would occur incrementally over a period of approximately 20 years and would be consistent with the regional planning objectives established for the Bay Area.

### 6.4 SIGNIFICANT AND IRREVERSIBLE CHANGES

Section 15126.2(d) of the CEQA Guidelines requires an EIR to discuss the extent to which the proposed project would commit nonrenewable resources to uses that future generations would probably be unable to reverse. The three CEQA-required categories of irreversible changes are discussed herein.

#### 6.4.1 CHANGES IN LAND USE THAT COMMIT FUTURE GENERATIONS

As described in detail in Chapter 3, *Project Description*, of this Draft EIR, the proposed project generally maintains the land use pattern of the existing General Plan. Due to the built-out nature of the EIR Study Area, new housing in San Carlos is expected to be concentrated on infill parcels near Downtown, along the El Camino Real corridor, along Old County Road between Holly Street and Terminal Avenue, and along East San Carlos Avenue. Most of the commercial growth is expected to occur in the Downtown area. Most of the office growth is expected in the Downtown and Northeast areas. Once future development under the proposed project occurs, it would not be feasible to return the developed land to its existing (pre-project) condition. Therefore, there is potential that some of the development allowed under the proposed project would most likely lead to irreversible changes in land use.

#### 6.4.2 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Irreversible changes to the physical environment could occur from accidental release of hazardous materials associated with development activities; however, compliance with the applicable regulations and General Plan goals, policies, and actions would reduce this potential impact to a less-than-significant level. Therefore, irreversible damage is not expected to result from the adoption and implementation of the proposed project.

## CEQA-REQUIRED ASSESSMENT CONCLUSIONS

### 6.4.3 LARGE COMMITMENT OF NONRENEWABLE RESOURCES

Future development would result in the commitment of limited, renewable resources, such as lumber and water. In addition, development allowed by the proposed project would irretrievably commit nonrenewable resources for the construction of buildings, infrastructure, and roadway improvements. These nonrenewable resources include mined minerals, such as sand, gravel, steel, lead, copper, and other metals. Future development also represents a long-term commitment to the consumption of fossil fuels, natural gas, and gasoline. Increased energy demands would be used for construction, lighting, heating, and cooling of residences, and transportation of people within, to, and from San Carlos. However, as shown in Chapter 4.5, *Energy*, and in Section 4.17.1, *Water*, and Section 4.17.3, *Solid Waste*, of Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, several regulatory measures and General Plan goals, policies, and actions encourage energy and water conservation, alternative energy use, waste reduction, alternatives to automotive transportation, and green building. Future development under the proposed project would be required to comply with all applicable building and design requirements, including those set forth in Title 24 relating to energy conservation. In compliance with CALGreen, the State's Green Building Standards Code, future development would be required to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials. Therefore, while the construction and operation of future development would involve the use of nonrenewable resources, compliance with applicable standards and regulations and implementation of General Plan goals, policies, and actions, and the continuation of the City's Climate Mitigation and Adaptation Plan strategies that would not be substantively changed, would reduce the use of nonrenewable resources to the maximum extent practicable. Therefore, the proposed project would not represent a large commitment of nonrenewable resources in comparison to a business-as-usual situation.

## 7. Organizations and Persons Consulted

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This Draft Environmental Impact Report (EIR) was prepared by the contributors listed herein and includes content and information provided by individuals with the lead agency, other agencies, service providers, consultants, and other contributors.

### 7.1 LEAD AGENCY

#### City of San Carlos

The City of San Carlos had numerous other staff that provided input or supported those specifically listed.

Nil Blackburn .....	Assistant City Manager
Al Savay .....	Director of Community & Economic Development
Andrea Mardesich .....	Assistant Community Development Director
Lisa Porras .....	Planning Manager
Akanksha Chopra .....	Associate Planner
Adam Aronson .....	Economic Development and Housing Manager
Lisa Costa Sanders .....	Principal Planner
Rucha Dande .....	Principal Planner
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Amy Newby .....	Parks and Recreation Director
Tyler Muela .....	Recreation Manager
Chris Valley .....	Building Official
Steven Machida .....	Director of Public Works
Hanieh Houshmandi .....	Senior Traffic Engineer
Grace Le .....	City Engineer
Quinne Wooley .....	Management Analyst
Cristian Padilla .....	Economic Development Coordinator

### 7.2 PERSONS CONSULTED

#### Redwood City-San Carlos Fire Department

Janice Cheung .....	Fire Marshal/Battalion Chief
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## ORGANIZATIONS AND PERSONS CONSULTED

### San Mateo County Sheriff's Office, San Carlos Police Bureau

Mark Myers ..... K9/Bomb Unit Commander  
Evanka Swampillai-Coss ..... Management Analyst

### San Mateo County Libraries

Danae Ramirez ..... Deputy Director of Library Administration

### San Carlos School District

Jennifer Frentress ..... Superintendent  
Amber Farinha ..... Director of Enterprise & Community Relations

### Sequoia Union High School District

Crystal Leach ..... Superintendent  
Christine Gong Melissa Gonzales ..... Assistant Superintendent

## 7.3 CONSULTANTS

### PlaceWorks: Environmental Prime Consultant

Alexis Mena ..... Associate Principal, Principal-In-Charge  
Madeline Miller ..... Project Planner, Project Manager  
Joanna Jansen ..... Principal, Community Engagement Lead  
Steve Bush ..... Senior Engineer II; Hydrology, Water Quality, and Utilities  
Dina El Chammas ..... Senior Engineer II; Hazards and Hazardous Materials  
Lance Park ..... Senior Associate II; Air Quality, Energy, and Greenhouse Gas Emissions  
Chris Shields ..... Senior Associate II, Noise  
Jacqueline Protsman Rohr ..... Senior Associate I, Wildfire  
Vivian Kha ..... Associate I, EIR Author  
Emily Parks ..... Associate I; Air Quality, Energy, and Greenhouse Gas Emissions  
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Grant Reddy ..... Graphics Designer, Graphics

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Anusha Musunuru ..... Senior Engineering Associate



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## ORGANIZATIONS AND PERSONS CONSULTED

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Mark Spencer ..... Senior Principal  
Kenny Jeong ..... Senior Traffic Engineer

### RSG: Market Demand Analysis

Jim Simon ..... Principal  
Brandon Fender ..... Senior Associate

## ORGANIZATIONS AND PERSONS CONSULTED

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APPENDIX A:  
NOTICE OF PREPARATION AND  
SCOPING COMMENTS



APPENDIX A1:  
NOTICE OF PREPARATION







# Notice of Preparation Environmental Impact Report

## City of San Carlos

**Date:** June 3, 2024

**To:** State Clearinghouse  
Governor's Office of Planning and Research  
San Mateo County Clerk  
Responsible and Trustee Agencies  
Interested Individuals and Organizations

**From:** Lisa Porras  
Planning Manager  
City of San Carlos  
600 Elm Street  
San Carlos, CA 94070-3085  
Email: LPorras@cityofsancarlos.org

**Subject:** Notice of Preparation (NOP) of the Draft Environmental Impact Report (EIR)  
for the 2045 General Plan Reset

**Lead Agency:** City of San Carlos

**Project Title:** 2045 General Plan Reset

**Project Location:** San Carlos, CA

### Call for Comments:

The City is requesting written comments from responsible agencies and the public regarding the scope and content of the environmental document regarding the 2045 General Plan Reset. The program-level EIR will evaluate the environmental impacts associated with the likely type and amount of development projected under the 2045 horizon year of the 2045 General Plan Reset. This EIR will not evaluate detailed, site-specific activities and future development projects under the General Plan. The EIR will include an evaluation of project alternatives that could reduce significant impacts associated with the proposed 2045 General Plan Reset. The proposed project, its location, and potential environmental effects are described below.

### Preparing an Environmental Impact Report:

Notice is hereby given that the City of San Carlos (City) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the 2045 General Plan Reset (proposed project) pursuant to the California Environmental Quality Act (CEQA) Guidelines (14 California Code of Regulations Section 15060(d)); however, several CEQA topic areas are not anticipated to result in significant environmental effects, thus, an Initial Study was prepared before the City begins work directly on the EIR.

**Comment Submittal:**

Written comments on the NOP are due no later than the close of the 30-day NOP review period at **5:00 p.m. on July 3, 2024**. Please send your written comments to Akanksha Chopra, Associate Planner, at the address shown below or email to [AdvancePlanning@cityofsancarlos.org](mailto:AdvancePlanning@cityofsancarlos.org) with “2045 General Plan Reset EIR” as the subject. Public agencies providing comments are asked to include a contact person for the agency.

City of San Carlos  
600 Elm Street  
San Carlos, California, 94070

The City is requesting comments and guidance on the scope and content of the EIR from interested public agencies, organizations, and individuals. With respect to the views of Responsible and Trustee Agencies as to significant environmental issues, the City needs to know the reasonable alternatives and mitigation measures that are germane to each agency’s statutory responsibilities in connection with the project.

**Public Meeting:**

The City is conducting an EIR Scoping Meeting on **Monday, June 17, 2024 at 7:00 p.m.** This meeting will be conducted both in person at City Hall and virtually via Zoom.

*In-Person Participation*

The meeting will be held at the Planning and Transportation Commission regular meeting in the City Hall Council Chambers, 600 Elm Street.

To address the Commission on any item on the posted agenda, fill out a Request to Speak Form located in the back of the Council Chambers and submit it to staff; or, you may raise your hand when the Chair calls for public comments.

Masks are no longer required, but are still recommended by the California Department of Health. To maintain public health and safety, please do not attend in person if you are experiencing respiratory symptoms (e.g. cough, runny nose, and/or sore throat).

*Remote Participation*

This meeting may also be observed remotely via the following options:

- Zoom: <https://us02web.zoom.us/j/88635467439>; or call 1-669-900-9128 and enter the Meeting ID #: 886 3546 7439
- Meeting Webportal: [www.cityofsancarlos.org/agenda](http://www.cityofsancarlos.org/agenda)
- Local TV: Comcast Channel 27 and AT&T Uverse Channel 99

If you require translation for this notice, please contact the City Clerk’s Office at 650-802-4222.

If you are participating remotely and plan to make a public comment on any item on the posted agenda, please observe the meeting via Zoom (see above access information), and, during the public comment period for the agenda item you wish to address, use the “raise hand” feature. If joining Zoom by phone, press \*9 to “raise hand.”

**Project Location:**

Along the San Francisco Bay, with the City of Belmont to the north and the City of Redwood City to the south, the City of San Carlos encompasses the land from the San Francisco Bay to Interstate 280. The proposed project applies citywide. The City of San Carlos, EIR Study Area, and Sphere of Influence (SOI) are mapped in Figure 1, Regional and Vicinity Map.

**Project Sponsor:**

City of San Carlos

**Project Description:**

The proposed project is an update to the City of San Carlos’ 2030 General Plan to amend the buildout capacity of the City of San Carlos’ General Plan.

There are currently a variety of planning efforts being undertaken in the city, as well as ongoing development projects. The Northeast Area Specific Plan and Downtown Specific Plan are being prepared concurrently with this project. An EIR is being prepared separately for the Northeast Area Specific Plan; please see the project website for details: <https://www.sancarlosnortheastplan.com/>. Because the Downtown Specific Plan is planned to be consistent with the 2045 General Plan Reset, it is anticipated that an Addendum to the General Plan Reset EIR will be prepared for the Downtown Specific Plan after certification of the 2045 General Plan Reset EIR; please see the project website for details: <https://www.sancarlosdowntownplan.com/>. Both Specific Plans include buildout projections that are incorporated into the citywide buildout capacity for the 2045 General Plan Reset.

Draft citywide buildout projections for the proposed 2045 General Plan Reset are provided in the table below. The numbers below represent net change from 2024 to 2045 within the city limit.

**Draft – Citywide Net New Development Projections, 2024-2045**

	<b>Downtown Specific Plan Area</b>	<b>Northeast Area Specific Plan Area</b>	<b>Remainder of the City</b>	<b>Total Citywide</b>
<b>Housing Units</b>	1,600	1,900	3,800	<b>7,300</b>
<b>Population</b>	3,000	3,700	7,300	<b>14,000</b>
<b>Non-residential Square Footage</b>	421,000	4,508,500	1,641,000	<b>6,570,500</b>
<b>Jobs</b>	1,000	13,800	4,200	<b>19,000</b>

If you require translation for this notice, please contact the City Clerk’s Office at 650-802-4222.

**Potential Environmental Effects:**

An EIR will be prepared to analyze potential environmental impacts associated with the project. The proposed project could potentially affect the following environmental factors and each will be addressed in the EIR:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Services
- Wildfire

The EIR will include an evaluation of project alternatives that could reduce or avoid potential significant impacts.

**Environmental Effects Not Likely to Require Further Analysis:**

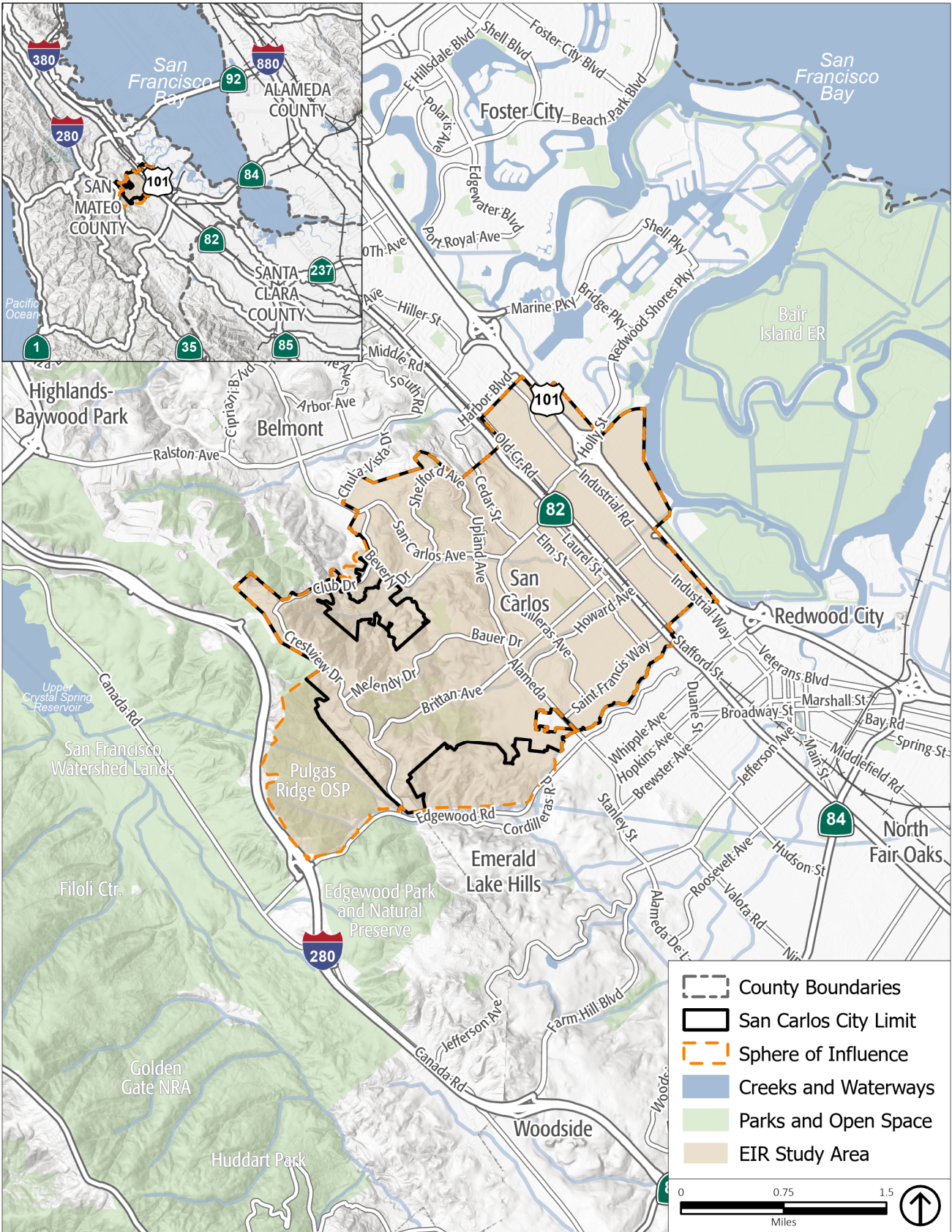
The proposed project is not anticipated to result in significant environmental effects on the following CEQA topic areas: agriculture and forestry resources, and mineral resources. An Initial Study was prepared to provide substantial evidence for these topic areas and is included as an attachment.

**Attachments:**

Attachment 1: Regional and Local Vicinity Map

Attachment 2: Initial Study





Source: City of San Carlos, 2024; PlaceWorks, 2024.

# Attachment 2: Initial Study

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## INTRODUCTION

This Initial Study Checklist was prepared to scope out and identify thresholds within the CEQA Checklist topics that will not be affected by the proposed project. All other thresholds within the CEQA Checklist topics will be addressed within the project Environmental Impact Report (EIR).

### I. AESTHETICS

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Have a substantial adverse effect on a scenic vista?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, 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?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## DISCUSSION

a-d) These standards of significance will be assessed in the EIR.

## MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

## INITIAL STUDY

## II. AGRICULTURE AND FORESTRY RESOURCES

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forestland (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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## DISCUSSION

- a-e) San Carlos is an urbanized setting and does not contain any Prime Farmland, Unique Farmland or Farmland of Statewide Importance.<sup>1</sup> There are no agricultural, forest, or timberland use zones or land uses within San Carlos.<sup>2</sup> Additionally, the city does not contain any Williamson Act contracts.<sup>3</sup> Neither San Carlos nor the immediately surrounding areas are zoned for forest land, timberland, or timber production. The proposed project would not involve changes to the existing environment that would result in the conversion of farmland to non-agricultural uses or forest land to non-forest use. Therefore, there would be *no impact*.

## MITIGATION MEASURES

None required.

<sup>1</sup> California Department of Conservation, 2021, California Important Farmland Finder, <https://maps.conservation.ca.gov/DLRP/CIFF/>, accessed May 3, 2024.

<sup>2</sup> City of San Carlos, October 2009, San Carlos 2030 General Plan, Chapter 6 – Environmental Management Element, Page 111.

<sup>3</sup> California Department of Conservation, 2023, California Williamson Act Enrollment Finder, <https://maps.conservation.ca.gov/dlrp/WilliamsonAct/>, accessed May 3, 2024.

**INITIAL STUDY****III. AIR QUALITY**

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or State ambient air quality standard?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**DISCUSSION**

a-d) These standards of significance will be assessed in the EIR.

**MITIGATION MEASURES**

Any necessary mitigation measures will be included in the EIR.

**IV. BIOLOGICAL RESOURCES**

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plan, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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 Wildlife or U.S. Fish and Wildlife Service?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) 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?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## INITIAL STUDY

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## DISCUSSION

a-f) These standards of significance will be assessed in the EIR.

## MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

## V. CULTURAL RESOURCES

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## DISCUSSION

a-c) These standards of significance will be assessed in the EIR.

## MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

## INITIAL STUDY

### VI. ENERGY

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### DISCUSSION

a-b) These standards of significance will be assessed in the EIR.

### MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

### VII. GEOLOGY AND SOILS

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) 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.	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) 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?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## INITIAL STUDY

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## DISCUSSION

a-f) These standards of significance will be assessed in the EIR. .

## MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

## VIII. GREENHOUSE GAS EMISSIONS

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## DISCUSSION

a-b) These standards of significance will be assessed in the EIR.

## MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

## IX. HAZARDS AND HAZARDOUS MATERIALS

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## INITIAL STUDY

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
b) 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) 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, result in a safety hazard or excessive noise for people residing or working in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## DISCUSSION

a-g) These standards of significance will be assessed in the EIR.

## MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

## X. HYDROLOGY AND WATER QUALITY

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## INITIAL STUDY

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
c) 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 off-site;	■	□	□	□
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or				
iv) Impede or redirect flood flows?				
d) In a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	■	□	□	□
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	■	□	□	□

## DISCUSSION

a-e) These standards of significance will be assessed in the EIR.

## MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

## XI. LAND USE AND PLANNING

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Physically divide an established community?	■	□	□	□
b) 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?	■	□	□	□

## DISCUSSION

a-b) These standards of significance will be assessed in the EIR.

MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

XII. MINERAL RESOURCES

Would the proposed project:	Potentially Significant	Less than Significant With Mitigation Incorporated	Less than Significant	No Impact
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

a) The California Geological Survey (CGS), classifies the regional significance of mineral resources in accordance with the California Surface Mining and Reclamation Act (SMARA) of 1975 and assists in the designation of lands containing significant aggregate resources. CSG’s Mineral Land Classification (MLC) Project provides objective economic-geologic expertise to assist in the protection and development of mineral resources through the land-use planning process. The mineral resource zone (MRZ) boundaries for San Carlos indicate that the city is in MRZ-1, MRZ-2, MRZ-3, and MRZ-4.<sup>4</sup> These MRZs indicate that either there is adequate information that no significant mineral deposits are present (MRZ-1); adequate information that significant mineral deposits are present, or there is a high likelihood for their presence (MRZ-2); adequate information that there are mineral deposits the significance of which cannot be evaluated from available data (MRZ-3); and inadequate information exists to assign an MRZ (MRZ4-4).<sup>5</sup> Areas in MRZ-2 are the areas of greatest concern for potential impacts to mineral resources.

There is one designated MRZ-2 in San Carlos, in northern San Carlos west of El Camino Real, in a developed portion of the city. There are no mining facilities with San Carlos and the closest mine is approximately 7 miles west of the City.<sup>6</sup> In addition, the city is not designated by SMARA as a regionally significant sector. Therefore, due to there being no significant mineral resources available, there would be *no impact*.

<sup>4</sup> California Department of Conservation, 1996, Generalized Mineral Land Classification Map of the South San Francisco Bay Production – Consumption Region, OFR 96-03, [https://filerequest.conservation.ca.gov/?q=OFR\\_96-03](https://filerequest.conservation.ca.gov/?q=OFR_96-03), accessed on May 3, 2024.

<sup>5</sup> California Department of Conservation, 1996, Generalized Mineral Land Classification Map of the South San Francisco Bay Production – Consumption Region, OFR 96-03, [https://filerequest.conservation.ca.gov/?q=OFR\\_96-03](https://filerequest.conservation.ca.gov/?q=OFR_96-03), accessed on May 3, 2024.

<sup>6</sup> California Department of Conservation, Mines Online, <https://maps.conservation.ca.gov/mol/index.html>

## INITIAL STUDY

- b) The EIR Study Area has not been classified or nominated as a locally important mineral resource recovery site.<sup>7</sup> Therefore, *no impact* would result.

## MITIGATION MEASURES

None required.

## XIII. NOISE

Would the proposed project result in:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	■	□	□	□
b) Generation of excessive groundborne vibration or groundborne noise levels?	■	□	□	□
c) 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 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	■	□	□	□

## DISCUSSION

- a-c) These standards of significance will be assessed in the EIR.

## MITIGATION MEASURES

Any necessary mitigation measures shall be included in the EIR.

<sup>7</sup> California Department of Conservation, 1996, Generalized Mineral Land Classification Map of the South San Francisco Bay Production – Consumption Region, OFR 96-03, [https://filerequest.conservation.ca.gov/?q=OFR\\_96-03](https://filerequest.conservation.ca.gov/?q=OFR_96-03), accessed on May 3, 2024.

## INITIAL STUDY

### XIV. POPULATION AND HOUSING

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Induce substantial unplanned population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	■	□	□	□
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	■	□	□	□

### DISCUSSION

a-b) These standards of significance will be assessed in the EIR.

### MITIGATION MEASURES

Any necessary mitigation measures shall be included in the EIR.

### XV. PUBLIC SERVICES

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i) Fire protection?	■	□	□	□
ii) Police protection?	■	□	□	□
iii) Schools?	■	□	□	□
iv) Parks?	■	□	□	□
v) Other public facilities?	■	□	□	□



## INITIAL STUDY

### DISCUSSION

- a) These standards of significance will be assessed in the EIR.

### MITIGATION MEASURES

Any necessary mitigation measures shall be included in the EIR.

## XVI. RECREATION

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) 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?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### DISCUSSION

- a-b) These standards of significance will be assessed in the EIR.

### MITIGATION MEASURES

Any necessary mitigation measures shall be included in the EIR.

## XVII. TRANSPORTATION

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## DISCUSSION

a-d) These standards of significance will be assessed in the EIR.

## MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

## XVIII. TRIBAL CULTURAL RESOURCES

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) 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 Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.	■	□	□	□

## DISCUSSION

CEQA Guidelines Section 15064.5(b)(1), defines a substantial adverse change in the significance of a historical resource (defined as historical resource, archaeological resource, or tribal cultural resource) involves the “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical would be materially impaired.”

a) These standards of significance will be assessed in the EIR.

## MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

## INITIAL STUDY

### XIX. UTILITIES AND SERVICE SYSTEMS

Would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) 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?	■	□	□	□
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	■	□	□	□
c) 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?	■	□	□	□
d) 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?	■	□	□	□
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	■	□	□	□

## DISCUSSION

a-e) These standards of significance will be assessed in the EIR.

## MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

### XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the proposed project:	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	■	□	□	□
b) 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?	■	□	□	□
c) 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?	■	□	□	□

INITIAL STUDY

	Potentially Significant	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the proposed project:				
d) 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?	■	□	□	□

DISCUSSION

a-d) These standards of significance will be assessed in the EIR.

MITIGATION MEASURES

Any necessary mitigation measures will be included in the EIR.

## **INITIAL STUDY**

### **REPORT PREPARERS**

This Initial Study was prepared by the following consultants and individuals:

#### **LEAD AGENCY**

##### **City of San Carlos**

Akanksha Chopra, Associate Planner

#### **LEAD CONSULTANT**

##### **PlaceWorks**

Steve Noack, Principal, Principal-in-Charge

Alexis Mena, Associate Principal, Project Manager

Madeline Miller, Project Planner

## APPENDIX A2: SCOPING COMMENTS





## NATIVE AMERICAN HERITAGE COMMISSION

June 4, 2024

Akanksha Chopra  
City of San Carlos  
600 Elm Street  
San Carlos CA 94070-3085

CHAIRPERSON  
**Reginald Pagaling**  
Chumash

VICE-CHAIRPERSON  
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Yokayo Pomo, Yuki,  
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**Bennae Calac**  
Pauma-Yuima Band of  
Luiseño Indians

EXECUTIVE SECRETARY  
**Raymond C.  
Hitchcock**  
Miwok, Nisenan

NAHC HEADQUARTERS  
1550 Harbor Boulevard  
Suite 100  
West Sacramento,  
California 95691  
(916) 373-3710  
[nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)

**Re: 2024060037, 2045 General Plan Reset Project, San Mateo County**

Dear Ms. Chopra:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines § 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

**Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**



AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

- 1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
  - a. A brief description of the project.
  - b. The lead agency contact information.
  - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
  - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).
- 2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report:** A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
  - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).
- 3. Mandatory Topics of Consultation If Requested by a Tribe:** The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
  - a. Alternatives to the project.
  - b. Recommended mitigation measures.
  - c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).
- 4. Discretionary Topics of Consultation:** The following topics are discretionary topics of consultation:
  - a. Type of environmental review necessary.
  - b. Significance of the tribal cultural resources.
  - c. Significance of the project's impacts on tribal cultural resources.
  - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).
- 5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process:** With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).
- 6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:** If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
  - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
  - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
  - A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- 10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- Avoidance and preservation of the resources in place, including, but not limited to:
    - Planning and construction to avoid the resources and protect the cultural and natural context.
    - Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
  - Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
    - Protecting the cultural character and integrity of the resource.
    - Protecting the traditional use of the resource.
    - Protecting the confidentiality of the resource.
  - Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
  - Protecting the resource. (Pub. Resource Code §21084.3 (b)).
  - Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
  - Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
  - The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
  - The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

## SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: [https://www.opr.ca.gov/docs/09\\_14\\_05\\_Updated\\_Guidelines\\_922.pdf](https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf).

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
  - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

## NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center ([https://ohp.parks.ca.gov/?page\\_id=30331](https://ohp.parks.ca.gov/?page_id=30331)) for an archaeological records search. The records search will determine:
  - a. If part or all of the APE has been previously surveyed for cultural resources.
  - b. If any known cultural resources have already been recorded on or adjacent to the APE.
  - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
  - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
  - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

**3. Contact the NAHC for:**

- a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
- b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

**4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.**

- a.** Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, § 15064.5(f) (CEQA Guidelines § 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
- b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
- c.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code § 7050.5, Public Resources Code § 5097.98, and Cal. Code Regs., tit. 14, § 15064.5, subdivisions (d) and (e) (CEQA Guidelines § 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:

[REDACTED]

Sincerely,

*Cody Campagne*

Cody Campagne  
Cultural Resources Analyst

cc: State Clearinghouse



State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
Bay Delta Region  
2825 Cordelia Road, Suite 100  
Fairfield, CA 94534  
(707) 428-2002  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

**GAVIN NEWSOM, Governor**  
**CHARLTON H. BONHAM, Director**



July 2, 2024

Akanksha Chopra, Associate Planner  
City of San Carlos  
600 Elm Street  
San Carlos, CA 94070  
[AdvancePlanning@cityofsancarlos.org](mailto:AdvancePlanning@cityofsancarlos.org)

Subject: 2045 General Plan Reset, Notice of Preparation of a Draft Environmental Impact Report, SCH No. 2024060037, City of San Carlos, San Mateo County

Dear Akanksha Chopra:

The California Department of Fish and Wildlife (CDFW) has reviewed the City of San Carlos's Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the 2045 General Plan Reset (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.<sup>1</sup>

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect fish and wildlife resources of the State. Please be advised, by law, CDFW may be required to carry out or approve aspects of the Project through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW is providing the City of San Carlos (City) as the Lead Agency, with specific detail about the scope and content of the environmental information related to CDFW's area of statutory responsibility that must be included in the EIR (See: Cal. Code Regs., tit. 14, § 15082, subd. (b).).

## CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) For purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

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<sup>1</sup> CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Akanksha Chopra, Associate Planner  
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CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority over the Project pursuant to the Fish and Game Code. For example, the Project may be subject to CDFW's Lake and Streambed Alteration (LSA) regulatory authority, if the Project impacts the bed, channel or bank of any river, stream or lake within the State (Fish & G. Code, § 1600 et seq.). Likewise, to the extent the Project may result in "take" as defined by state law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

## **REGULATORY REQUIREMENTS**

### **California Endangered Species Act**

A CESA Incidental Take Permit (ITP) must be obtained from CDFW if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. Under CESA, "take" means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (Fish & G. Code, § 86.) CDFW's issuance of an ITP is subject to CEQA and to facilitate permit issuance, any project modifications and mitigation measures must be incorporated into the CEQA document analysis, discussion, and mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA permit.

CEQA requires a mandatory finding of significance if a project is likely to substantially impact threatened or endangered species. (Pub. Resources Code, §§ 21001, subd. (c) & 21083; CEQA Guidelines, §§ 15380, 15064 & 15065.) In addition, pursuant to CEQA, the Lead Agency cannot approve a project unless all impacts to the environment are avoided or mitigated to less-than-significant levels, or the Lead Agency makes and supports Findings of Overriding Consideration (FOC) for impacts that remain significant despite the implementation of all feasible mitigation. FOC under CEQA, however, do not eliminate the Project proponent's obligation to comply with the Fish and Game Code.

### **Lake and Streambed Alteration**

CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et seq., for Project activities affecting river, lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank (including associated riparian or wetland resources); or deposit or dispose of material where it may pass into a river, lake, or stream. Work within ephemeral streams, drainage ditches, washes, watercourses with a subsurface flow, and floodplains is generally subject to notification requirements. In



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addition, infrastructure installed beneath such aquatic features, such as through hydraulic directional drilling, is also generally subject to notification requirements. Therefore, any impact to the mainstems, tributaries, or floodplains or associated riparian habitat caused by the proposed Project will likely require an LSA Notification. CDFW may not execute a final LSA Agreement until it has considered the final EIR and complied with its responsibilities as a responsible agency under CEQA.

### **Migratory Birds and Raptors**

CDFW has authority over actions that may result in the disturbance or destruction of active bird nest sites or the unauthorized take of birds. Fish and Game Code sections protecting birds, their eggs, and nests include section 3503 (regarding unlawful take, possession, or needless destruction of the nests or eggs of any bird), section 3503.5 (regarding the take, possession, or destruction of any birds-of-prey or their nests or eggs), and section 3513 (regarding unlawful take of any migratory nongame bird). Migratory birds are also protected under the federal Migratory Bird Treaty Act.

### **PROJECT DESCRIPTION AND LOCATION SUMMARY**

**Proponent:** 2045 General Plan Reset

**Objective:** The objective of the Project is to update the City of San Carlos 2030 General Plan. Primary Project activities include amending the City of San Carlos 2030 General Plan to address land use and development objective components related to buildout capacity.

**Location:** City of San Carlos (Citywide)

**Timeframe:** 2030-2045

The CEQA Guidelines (§§15124 & 15378) require that the draft EIR incorporate a full Project description, including reasonably foreseeable future phases of the Project, and that contains sufficient information to evaluate and review the Project's environmental impact. Please include a complete description of the following Project components in the Project description including, but not limited to, the below information.

- Land use changes resulting from, for example, rezoning certain areas.
- Area and plans for any proposed buildings/structures, ground-disturbing activities, fencing, paving, stationary machinery, landscaping, and stormwater systems.
- Operational features of the Project, including level of anticipated human presence (describe seasonal or daily peaks in activity, if relevant), artificial lighting/light reflection, noise, traffic generation, and other features.

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## ENVIRONMENTAL SETTING

Sufficient information regarding the environmental setting is necessary to understand any potentially significant impacts on the environment of the proposed Project and any alternatives identified in the draft EIR (CEQA Guidelines, §§15125 & 15360). CDFW recommends the draft EIR provide baseline habitat assessments for special-status plant, fish and wildlife species located and potentially located within the Project area and surrounding lands, including all rare, threatened, and endangered species (CEQA Guidelines, §15380). The draft EIR should describe aquatic habitats, such as wetlands or waters of the U.S. or State, and any sensitive natural communities or riparian habitat occurring on or adjacent to the Project site (for sensitive natural communities see: <https://wildlife.ca.gov/Data/VegCAMP/NaturalCommunities#sensitive%20natural%20communities>), and any stream or wetland set back distances the City may require. Fully protected, threatened or endangered, candidate, and other special-status species or sensitive natural communities that are known to occur, or have the potential to occur in or near the Project site, include, but are not limited to the species listed in Attachment A.

Habitat descriptions and species profiles included in the draft EIR should include robust information from multiple sources: aerial imagery; historical and recent survey data; field reconnaissance; scientific literature and reports; Habitat Conservation Plans; U.S. Fish and Wildlife Service's (USFWS) Information, Planning, and Consultation System; California Aquatic Resources Inventory; and findings from "positive occurrence" databases such as California Natural Diversity Database (CNDDDB). Only with sufficient data and information can the City adequately assess which special-status species are likely to occur in the Project vicinity.

CDFW recommends surveys be conducted for special-status species with potential to occur, following recommended survey protocols if available. Survey and monitoring protocols and guidelines are available at: <https://www.wildlife.ca.gov/Conservation/Survey-Protocol>.

Botanical surveys for special-status plant species, including those listed by the California Native Plant Society (<http://www.cnps.org/cnps/rareplants/inventory/>), should also be conducted during the blooming period for all sensitive plant species potentially occurring within the Project area and include the identification of reference populations. Please refer to CDFW protocols for surveying and evaluating impacts to rare plants available at: <https://www.wildlife.ca.gov/Conservation/Plants>.

## IMPACT ANALYSIS AND MITIGATION MEASURES

The CEQA Guidelines (§15126.2) necessitate the draft EIR discuss all direct and indirect impacts (temporary and permanent) that may occur with implementation of the Project. This includes evaluating and describing impacts such as:



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- Land use changes that would reduce open space or agricultural land uses and increase residential or other land use involving increased development;
- Potential for impacts to special-status species;
- Loss or modification of breeding, nesting, dispersal and foraging habitat, including vegetation removal, alternation of soils and hydrology, and removal of habitat structural features (e.g., snags, roosts, overhanging banks);
- Permanent and temporary habitat disturbances associated with ground disturbance, noise, lighting, reflection, air pollution, traffic or human presence;
- Obstruction of movement corridors, fish passage, or access to water sources and other core habitat features;
- Water quality impacts as a result of the Project;
- Impacts to the bed, channel, and bank, in lakes and streams as a result of the Project; and
- Impacts to bed, channel, bank, and riparian habitat, and the direct and indirect effects to fish, wildlife, and their habitat.

The CEQA document also should identify existing and reasonably foreseeable future projects in the Project vicinity, disclose any cumulative impacts associated with these projects, determine the significance of each cumulative impact, and assess the significance of the Project's contribution to each impact (CEQA Guidelines, §15355). Although a project's impacts may be insignificant individually, its contributions to a cumulative impact may be considerable; a contribution to a significant cumulative impact (e.g., reduction of available habitat for a listed species) should be considered cumulatively considerable without mitigation to minimize or avoid the impact.

The CEQA Guidelines direct the City, as the Lead Agency, to consider and describe in the draft EIR all feasible mitigation measures to avoid and/or mitigate potentially significant impacts of the Project on the environment based on comprehensive analysis of the potential direct, indirect, and cumulative impacts of the Project. (CEQA Guidelines, §§ 15021, 15063, 15071, 15126.2, 15126.4 & 15370.) This should include a discussion of take avoidance and minimization measures for special-status species, which are recommended to be developed in early consultation with USFWS, the National Marine Fisheries Service and CDFW. These measures can then be incorporated as enforceable Project conditions to reduce potential impacts to biological resources to less-than-significant levels.

Akanksha Chopra, Associate Planner  
City of San Carlos  
July 2, 2024  
Page 6

Fully protected species such as California black rail (*Laterallus jamaicensis coturniculus*) or salt-marsh harvest mouse (*Reithrodontomys raviventris*) may not be taken or possessed at any time except in limited circumstances (Fish & G. Code, §§ 3511, 4700, 5050, & 5515). Therefore, the draft EIR should include measures to completely avoid take of fully protected species.

## ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to prepare subsequent CEQA documents or to make supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (d) & (e).) Accordingly, please report any special-status species and natural communities detected during Project surveys to the CNDDB. The CNDDB field survey form can be filled out and submitted online here: <https://wildlife.ca.gov/Data/CNDDB/Submitting-Data>. The types of information reported to CNDDB can be found here: <https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals>.

## ENVIRONMENTAL DOCUMENT FILING FEES


CDFW anticipates that the proposed Project, will have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (See: Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.).

## CONCLUSION

CDFW appreciates the opportunity to comment on the NOP in order to assist the City of San Carlos in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Jason Teichman, Environmental Scientist at [REDACTED] or [REDACTED]; or Wesley Stokes, Senior Environmental Scientist, (Supervisory), at [REDACTED] or [REDACTED].

Sincerely,

DocuSigned by:  
  
B77E9A6211EF486  
Erin Chappell  
Regional Manager  
Bay Delta Region

Akanksha Chopra, Associate Planner  
City of San Carlos  
July 2, 2024  
Page 7

Attachments: Attachment A: Biological resources, City of San Carlos, California, June 26, 2024.

ec: Office of Planning and Research, State Clearinghouse (SCH No. 2024060037)

## Attachment A: Biological Resources, City of San Carlos

Common Name	Scientific Name	Federal Status	State Status	Rare Plant Rank	CDFW Status
Alameda song sparrow	Melospiza melodia pusillula	None	None		SSC
American peregrine falcon	Falco peregrinus anatum	Delisted	Delisted		
arcuate bushmallow	Malacothamnus arcuatus var. arcuatus	None	None	1B.2	
Bay checkerspot butterfly	Euphydryas editha bayensis	Threatened	None		
bent-flowered fiddleneck	Amsinckia lunaris	None	None	1B.2	
California black rail	Laterallus jamaicensis coturniculus	None	Threatened		FP
California least tern	Sternula antillarum browni	Endangered	Endangered		FP
California red-legged frog	Rana draytonii	Threatened	None		SSC
California Ridgway's rail	Rallus obsoletus obsoletus	Endangered	Endangered		FP
chaparral ragwort	Senecio aphanactis	None	None	2B.2	
Choris' popcornflower	Plagiobothrys chorisianus var. chorisianus	None	None	1B.2	
coastal marsh milk-vetch	Astragalus pycnostachyus var. pycnostachyus	None	None	1B.2	
Crystal Springs lessingia	Lessingia arachnoidea	None	None	1B.2	
double-crested cormorant	Nannopterum auritum	None	None		WL
Edgewood blind harvestman	Calicina minor	None	None		
Edgewood Park micro-blind harvestman	Microcina edgewoodensis	None	None		
foothill yellow-legged frog - central coast DPS	Rana boylei pop. 4	Threatened	Endangered		
fountain thistle	Cirsium fontinale var. fontinale	Endangered	Endangered	1B.1	
fragrant fritillary	Fritillaria liliacea	None	None	1B.2	
Franciscan onion	Allium peninsulare var. franciscanum	None	None	1B.2	
great blue heron	Ardea herodias	None	None		
green sturgeon - southern DPS	Acipenser medirostris pop. 1	Threatened	None		SSC
hoary bat	Lasiurus cinereus	None	None		
Kings Mountain manzanita	Arctostaphylos regismontana	None	None	1B.2	
Marin western flax	Hesperolinon congestum	Threatened	Threatened	1B.1	
northern harrier	Circus hudsonius	None	None		SSC
pallid bat	Antrozous pallidus	None	None		SSC
Point Reyes salty bird's-beak	Chloropyron maritimum ssp. palustre	None	None	1B.2	
Ricksecker's water scavenger beetle	Hydrochara rickseckeri	None	None		
saline clover	Trifolium hydrophilum	None	None	1B.2	
saltmarsh common yellowthroat	Geothlypis trichas sinuosa	None	None		SSC
salt-marsh harvest mouse	Reithrodontomys raviventris	Endangered	Endangered		FP
salt-marsh wandering shrew	Sorex vagrans halicoetes	None	None		SSC
San Francisco champion	Silene verecunda ssp. verecunda	None	None	1B.2	
San Francisco collinsia	Collinsia multicolor	None	None	1B.2	
San Francisco dusky-footed woodrat	Neotoma fuscipes annectens	None	None		SSC
San Francisco gartersnake	Thamnophis sirtalis tetrataenia	Endangered	Endangered		FP
San Francisco owl's-clover	Triphysaria floribunda	None	None	1B.2	
San Mateo thorn-mint	Acanthomintha duttonii	Endangered	Endangered	1B.1	
Santa Cruz kangaroo rat	Dipodomys venustus venustus	None	None		
Serpentine Bunchgrass	Serpentine Bunchgrass	None	None		
short-eared owl	Asio flammeus	None	None		SSC
western bumble bee	Bombus occidentalis	None	Candidate Endangered		
western leatherwood	Dirca occidentalis	None	None	1B.2	
western pond turtle	Emys marmorata	Proposed Threatened	None		SSC
western snowy plover	Charadrius nivosus nivosus	Threatened	None		SSC
white-rayed pentachaeta	Pentachaeta bellidiflora	Endangered	Endangered	1B.1	
woodland woollythreads	Monolopia gracilens	None	None	1B.2	
yellow rail	Coturnicops noveboracensis	None	None		SSC

Biological resources that may occur in the City of San Carlos, California, California Natural Diversity Database (CNDDDB), June 26, 2024



July 2, 2024

Lisa Porras, Planning Manager  
City of San Carlos  
600 Elm Street  
San Carlos, CA 94070-3085

c/o: Akanksha Chopra, Associate Planner, [AdvancePlanning@cityofsancarlos.org](mailto:AdvancePlanning@cityofsancarlos.org)

**RE: Notice of Preparation (NOP) of the Draft Environmental Impact Report (EIR) for the 2045 General Plan Reset [2045 General Plan Reset EIR]**

The City of Redwood City appreciates the opportunity to review the Notice of Preparation for the Draft EIR for San Carlos' 2045 General Plan Reset.

Redwood City understands the City of San Carlos no longer uses Level of Service as a CEQA impact and now uses Vehicle Miles Travelled (VMT) as the adopted CEQA metric to analyze transportation impacts. While not required by CEQA, Redwood City would like to know if San Carlos would be undertaking a Local Transportation Analysis (LTA) and if so, what intersections bordering Redwood City/San Carlos would be included in the LTA.

Redwood City is currently in the process of designing a Transportation Management Association (TMA) for Redwood City, one of the goals which is to coordinate Transportation Demand Management (TDM) efforts of individual development projects to reduce VMT in Redwood City. Redwood City wanted to identify our work on the TMA as an opportunity for collaboration and future cross participation between our cities. If you have any questions about Redwood City's TMA efforts, please feel free to contact Christian Hammack, Parking/TDM Manager, Engineering & Transportation Department, at [REDACTED] or [REDACTED].

Thank you again for your continued outreach and coordination with Redwood City. If you have any questions or concerns about these comments, please feel free to contact me at [REDACTED] or [REDACTED].

Best,

*Melinda Hue*

Melinda Hue, Principal Planner - CEQA Coordinator  
Redwood City Community Development Department, Planning Division

cc: Jeff Schwob, Community Development Director; Sue Exline, Assistant Community Development Director; Christian Hammack, Parking/TDM Manager; Malahat Owrang, Senior Transportation Planner

## California Department of Transportation

DISTRICT 4  
OFFICE OF REGIONAL AND COMMUNITY PLANNING  
P.O. BOX 23660, MS-10D | OAKLAND, CA 94623-0660  
[www.dot.ca.gov](http://www.dot.ca.gov)



July 3, 2024

SCH #: 2024060037  
GTS #: 04-SM-2024-00580  
GTS ID: 33077  
Co/Rt/Pm: SM/VAR/VAR

Akanksha Chopra, Associate Planner  
City of San Carlos  
600 Elm Street  
San Carlos, CA 94070-3085

### **Re: 2045 General Plan Reset — Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR)**

Dear Akanksha Chopra:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the 2045 General Plan (GP) Reset. The Local Development Review (LDR) Program reviews land use projects and plans to ensure consistency with our mission and state planning priorities. The following comments are based on our review of the June 2024 NOP.

Please note this correspondence does not indicate an official position by Caltrans on this project and is for informational purposes only.

#### **Project Understanding**

The proposed project is an update to the City of San Carlos' 2030 GP to amend the buildout capacity. Citywide development projections for growth through 2045 include the estimated net addition of 7,300 housing units, 14,000 new residents, 6,570,500 non-residential square footage, and 19,000 jobs. Sections of U.S. Route 101 (U.S. 101) and State Route 82 (SR-82) are within the San Carlos city limits.

#### **Travel Demand Analysis**

With the enactment of Senate Bill (SB) 743, Caltrans is focused on maximizing efficient development patterns, innovative travel demand reduction strategies, and multimodal improvements. For more information on how Caltrans assesses Vehicle Miles Traveled (VMT) analysis for land use projects, please review Caltrans' Transportation Impact Study Guide ([link](#)).

Per the Initial Study, this project may have a potentially significant VMT impact which will be further evaluated in the DEIR. Caltrans looks forward to reviewing the VMT analysis when the DEIR is available.

### **Multimodal Transportation Planning**

Please review and include the reference to the *Caltrans District 4 Pedestrian Plan* (2021) and the *Caltrans District 4 Bike Plan* (2018) in the DEIR. These two plans studied existing conditions for walking and biking along and across the State Transportation Network (STN) in the nine-county Bay Area and developed a list of location-based and prioritized needs.

Please note that any Complete Streets reference should be updated to reflect Caltrans Director's Policy 37 ([link](#)) that highlights the importance of addressing the needs of non-motorists and prioritizing space-efficient forms of mobility, while also facilitating goods movement in a manner with the least environmental and social impacts. This supersedes Deputy Directive 64-R1, and further builds upon its goals of focusing on the movement of people and goods.

### **Equity and Public Engagement**

We will achieve equity when everyone has access to what they need to thrive no matter their race, socioeconomic status, identity, where they live, or how they travel. Caltrans is committed to advancing equity and livability in all communities. We look forward to collaborating with the City to prioritize projects that are equitable and provide meaningful benefits to historically underserved communities.

Caltrans encourages the City to foster meaningful, equitable and ongoing public engagement in the GP development process to ensure future transportation decisions and investments reflect community interests and values. The public engagement process should include community-sensitive and equity-focused approaches seeking out the needs of individuals from underserved, Tribal, and low-income communities, the elderly, and individuals with disabilities.

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, please contact Luana Chen, Transportation Planner, via [REDACTED]. For future early coordination opportunities or project referrals, please contact [REDACTED].

Sincerely,

Akanksha Chopra, Associate Planner  
July 3, 2024  
Page 3

A handwritten signature in black ink, appearing to read "Luo Yunsheng". The signature is fluid and cursive, with the first name "Luo" and last name "Yunsheng" clearly distinguishable.

YUNSHENG LUO  
Branch Chief, Local Development Review  
Office of Regional and Community Planning

c: State Clearinghouse





July 3, 2024

Sent Via Email

City of San Carlos  
 Attn: Akanksha Chopra, Associate Planner  
 600 Elm Street  
 San Carlos, California, 94070

**Subject:** Notice of Preparation (NOP) of the Draft Environmental Impact Report (EIR) for the 2045 General Plan Reset

Dear Ms. Chopra,

Thank you for the opportunity to comment on the Notice of Preparation (NOP) of the Draft Environmental Impact Report (EIR) for the 2045 General Plan Reset for the City of San Carlos.

The Local Agency Formation Commission (LAFCo) is a state mandated agency established in every county to oversee the boundaries of cities and special districts. San Mateo LAFCo has jurisdiction over the boundaries of the 20 cities, 22 independent special districts, and many of the 33 active county and city governed special districts serving San Mateo County.

The NOP states that the scope of the study area includes land both within the existing City limits as well as lands within the LAFCo designated Sphere of Influence (SOI) of the City. LAFCo support the inclusion of the City's SOI area within the study area.

San Mateo LAFCo has the following comments on the NOP for the proposed 2045 General Plan Reset:

- LAFCo encourages the City to review current City general plan land use designations for lands in the SOI. In the 2009 General Plan, the lands within the City's SOI do not have City land use designations. The City could evaluate potential land use designations for the parcels within the City's SOI along the development potential of the SOI areas as part of the EIR and General Plan reset.
- The NOP notes the Draft Citywide Net New Development Projections for 2024-2045. LAFCo encourages the City to also evaluate the development projections for lands

**COMMISSIONERS:** KATI MARTIN, CHAIR, SPECIAL DISTRICT ▪ RAY MUELLER, VICE CHAIR, COUNTY ▪ VIRGINIA CHANG-KIRALY, SPECIAL DISTRICT ▪ HARVEY RARBACK, CITY ▪ TYGARJAS BIGSTYCK, CITY ▪ WARREN SLOCUM, COUNTY ▪ ANN DRAPER, PUBLIC

**ALTERNATES:** CHRIS MICKELSEN, SPECIAL DISTRICT ▪ ANN SCHNEIDER, CITY ▪ JAMES O'NEILL, PUBLIC ▪ NOELIA CORZO, COUNTY

**STAFF:** ROB BARTOLI, EXECUTIVE OFFICER ▪ VACANT, MANAGEMENT ANALYST ▪ TIM FOX, LEGAL COUNSEL ▪

DIANE ESTIPONA, CLERK

within the SOI and the potential of annexation of those lands to the City as part of the EIR and General Plan Update.

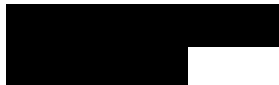
- Several areas within the City's SOI such as Palomar Park and portions of Devonshire rely on on-site septic systems for wastewater disposal. In the EIR and the General Plan reset, the City should consider evaluating the City's sewer treatment capacity and sewer infrastructure capacity for both future development and the extension of sewer infrastructure to properties within the City's SOI.

San Mateo LAFCo looks forward to reviewing all future documents related to the General Plan reset process and the Draft Environmental Impact Report.

Sincerely,

*Rob Bartoli*

Rob Bartoli  
Executive Officer





**Yana Garcia**  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

Meredith Williams, Ph.D., Director  
8800 Cal Center Drive  
Sacramento, California 95826-3200



**Gavin Newsom**  
Governor

### SENT VIA ELECTRONIC MAIL

June 20, 2024

Akanksha Chopra  
Associate Planner  
City of San Carlos  
600 Elm Street  
San Carlos, CA 94070-3085

[AdvancePlanning@cityofsancarlos.org](mailto:AdvancePlanning@cityofsancarlos.org)

RE: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT  
FOR THE 2045 GENERAL PLAN RESET DATED JUNE 3, 2024 STATE  
CLEARINGHOUSE NUMBER [2024060037](#)

Dear Akanksha Chopra,

The Department of Toxic Substances Control (DTSC) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the 2045 General Plan Reset (project). The proposed project is an update to the City of San Carlos 2030 General Plan to amend the buildout capacity of the City of San Carlos General Plan.


DTSC requests consideration of the following comments:

1. The proposed project encompasses multiple active and nonactive mitigation and clean-up sites where DTSC has conducted oversight that may be impacted as a result of this project. This may restrict what construction activities are permissible in the proposed project areas in order to avoid any impacts to human health and the environment.
2. Due to the broad scope of the project, DTSC is unable to determine the

locations of the proposed sites, whether they are listed as having documented contamination, land use restrictions, or whether there is the potential for the sites to be included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, DTSC recommends providing further information on the proposed project and areas that may fall under DTSC's oversight within future environmental documents. Once received, DTSC may provide additional comments on future environmental documents as further information becomes available. Please review the project area in [EnviroStor](#), DTSC's public-facing database.

DTSC believes the City of San Carlos must address these comments to determine if any significant impacts under the California Environmental Quality Act (CEQA) will occur and, if necessary, avoid significant impacts under CEQA. DTSC recommends the department connect with our unit if any hazardous waste projects managed or overseen by DTSC are discovered.

Please refer to the [City of San Carlos EnviroStor Map](#) for additional information about the areas of potential contamination. If further concerns or impacts surface in light of the forthcoming EIR, DTSC reserves the right to provide applicable comments at that time.

DTSC appreciates the opportunity to comment on the NOP of a DEIR for the 2045 General Plan Reset. Thank you for your assistance in protecting California's people and environment from the harmful effects of toxic substances. If you have any questions or would like any clarification on DTSC's comments, please respond to this letter or via  for additional guidance.

Akanksha Chopra

June 20, 2024

Page 3

Sincerely,

*Dave Kereazis*

Dave Kereazis

Associate Environmental Planner

HWMP - Permitting Division – CEQA Unit

Department of Toxic Substances Control

[REDACTED]

cc: (via email)

Governor's Office of Planning and Research

State Clearinghouse

[State.Clearinghouse@opr.ca.gov](mailto:State.Clearinghouse@opr.ca.gov)

Tamara Purvis

Associate Environmental Planner

HWMP – Permitting Division - CEQA Unit

Department of Toxic Substances Control

[REDACTED]

Scott Wiley

Associate Governmental Program Analyst

HWMP – Permitting Division - CEQA Unit

Department of Toxic Substances Control

[REDACTED]



Kelly M. Rem  
Attorney at Law

E-mail: [REDACTED]

October 18, 2024

By E-Mail: [REDACTED]

Madeline Miller  
Project Planner  
Placeworks

Re: Response of Sequoia Union High School District to Questions Regarding School Facilities Impacts and City of San Carlos to Notice of Preparation for the 2045 General Plan Reset

Dear Ms. Miller:

This office represents Sequoia Union High School District ("District"). Thank you for reaching out and providing the District with the opportunity to provide comments and input regarding the school facilities impacts related to the City of San Carlos to Environmental Impact Report ("EIR") for the 2045 General Plan Reset ("General Plan"). This letter supplements the information the District sent you in its September 27, 2024 e-mail correspondence.

We look forward to working with the City of San Carlos to ensure that the General Plan's anticipated impacts are fully analyzed, understood, and ultimately mitigated. We understand that the General Plan includes an inventory of housing sites with a projected capacity for up to 8,300 new homes. The implementation of the General Plan's programs to facilitate development of housing sites would have an impact on the District's schools, particularly Sequoia High School and Carlmont High School.

Before addressing the specific questions you have raised, we'd like to clarify that there are a wide variety of potential impacts posed by large scale commercial and residential development projects within District boundaries. The questionnaire you have provided seeks information primarily related to the District's current and projected enrollment, capacity, developer fees, and facilities planning.

Generally speaking, there are two different types of development impacts on schools: (1) impacts on the District's budget for the education of students, and (2) impacts related to District school facilities, including indirect impacts such as traffic, safe paths to school, noise, and air pollution.

*Limited Liability Partnership*

2001 North Main Street, Suite 500 Walnut Creek, California 94596 Tel 925-953-1620 Fax 925-953-1625

The first type of impact interferes with the District's need for or ability to obtain revenue received through property taxes that goes toward the overall operation of schools, staff salaries, and into the classroom. These funds are generally not used for facilities.

The second type of impact creates a need for new, expanded, or modernized school facilities in order to maintain safe and acceptable district service and performance objectives. Developers and lead agencies often assume that the only impact development can have on school district facilities is through the introduction of more students. Developers then build on this assumption to conclude that a development's introduction of new students will either create a need for new school facilities (if a district is over capacity), or it will not (if the district is under capacity). In any event, developers typically rely on Government Code section 65996 and Senate Bill 50 ("SB 50"), for the assertion that all demands placed on school district facilities can be mitigated simply by the payment of statutory developer fees.

The above assumptions are both practically and legally incorrect. First, development projects can impose a wide variety of impacts related to school facilities beyond the simple need to acquire more or expand existing facilities to accommodate increased enrollment. For example, new residential and commercial projects often introduce hundreds of new cars into neighborhoods where there are existing schools, or along paths of travel that are frequently used by students and their families to get to school. These increases in traffic pose numerous other impacts on the District and District families, including dangerous traffic conditions caused by an increase in vehicles on roads that are not equipped to handle heavy traffic levels; increased commute times; increased vehicle exhaust and pollution; increased noise from construction; and a reduction in available parking for District staff, students, and families. These impacts, in turn, necessitate that the District take action to continue safely and effectively providing its education program by diverting students from one school to another, acquiring more land to use as parking or other school facilities, and/or modernizing existing facilities or intersections to mitigate the above impacts.

The payment of statutory developer fees is not adequate to resolve all of the above impacts. Many developers and lead agencies assert that if a school district will have enough seats to house additional students generated by development, Government Code section 65996 allows for the conclusion that "payment of the applicable school impact fee is deemed to be full and complete mitigation under CEQA for impacts on school facilities." **This approach is inconsistent with California law, as California courts have acknowledged that developer fees do not constitute full and complete mitigation for school-related impacts other than school overcrowding.** (*Chawanakee Unified Sch. Dist. v. Cty. of Madera* (2011) 196 Cal.App.4th 1016 ("Chawanakee").) In other words, California courts have held that developer fees serve as complete mitigation only for certain impacts on school facilities caused by overcrowding. Developer fees do not, however, serve as complete mitigation for all other impacts on school districts or related to school district facilities, including those related to traffic, noise, air quality, and pedestrian safety, which impacts must be analyzed during the CEQA process.

Additionally, from a practical perspective, the amount of developer fees received by school districts typically fall woefully short of alleviating the wide variety of impacts caused by development. This is due largely to the facts that: (1) statutory developer fee amounts fail to acknowledge the differences in costs of school construction from one district to another, which

particularly burdens school districts in the Bay Area, where both land and construction costs exceed other parts of the state; (2) the developer fee amounts fail to contemplate the special facilities needs of those districts experiencing rapid growth, such as the need for portables; and (3) the adjustment formula for developer fees is based on a “construction cost index” and does not include indexing related to the increases in land costs, resulting in the actual costs of facilities (i.e., land and improvements) increasing at a greater rate than the adjustment.

The inadequacy of developer fees as a source of funding for school facilities has forced school districts to rely increasingly on other sources of funding, primarily including local bond funds and State bond funds administered under the School Facilities Program (SFP). However, these sources of funds can be equally unreliable. Local bond funds are difficult to generate, as local bonds are subject to school district bonding capacity limitations and voter approval. State funds are also unreliable and take considerable time to obtain. Either way, the funding formula was never intended to require the State and local taxpayers to shoulder a disproportionate share of the cost of school facilities.

In sum, the interplay between new development and the wide variety of resulting impacts on schools presents unique and complex issues, all of which must be analyzed through the CEQA process. Impacts that do not initially present as “fiscal impacts” to the District, like traffic impacts that affect a student population, often end up having significant fiscal impacts on the District. Many of these impacts can be reduced or even avoided by ensuring that the developers work with the District in order to ensure the availability of facilities or other appropriate mitigation in the Project area in a timely fashion.

Within the context of this information, below you will find the District’s responses to your inquiries:

1. *Please confirm that the Existing Conditions information below is accurate, or update as needed.*

Most of the students within San Carlos would attend Carlmont High, with some of the students attending Sequoia High. It is confirmed that total enrollment is 9,741 students.

2. *Does the school district identify Developer Impact Fees for new development? If so, please describe the fees.*

The District’s September 27, 2024, response should be corrected to accurately reflect the developer fees the District imposes. The District is subject to a fee-sharing agreement with its feeder elementary school districts that only authorizes the District to levy forty percent (40%) of the total fees authorized by Government Code section 65995, subdivision (b)(3), for development in areas which the District provides school services. The remaining permitted fees are allocated to feeder elementary school district(s) within whose boundaries the residential, commercial, or industrial development will occur.

Based on the fee-sharing agreement, the District currently imposes statutory “Level 1” developer fees in the amount of **\$2.07 per square foot for residential development** (40% of \$5.17 per



square foot) and **\$0.34 per square foot of commercial or industrial development** (40% of \$0.84 per square foot).

3. *What is the capacity of the schools serving San Carlos? Does the School District currently exceed its student capacity and, if so, by how much?*

The capacity of Carlmont High School is 2,343. Its current enrollment is 2,360 students, so it is currently exceeding its capacity by seventeen (17) students. Therefore, the District's prior response indicating that it does not exceed its student capacity should be corrected to reflect that ***Carlmont High currently exceeds its capacity.***

The capacity of Sequoia High School is 2,515. Its current enrollment is 1,903. Although there is some capacity at Sequoia High School that could be used to house students generated by new development in San Carlos, as mentioned, the majority of students in San Carlos would likely attend or wish to attend Carlmont High. Adding students to Sequoia High would not be a long-term solution and would result in negative impacts, such as increased traffic (see discussion above). Further, Sequoia High will be needed to house students resulting from development in Redwood City.

4. *What are the student enrollment projections for SUHSD? Does the School District anticipate that enrollment will exceed capacity at any of its schools?*

Enrollment projections are uncertain, as enrollment depends on a variety of factors, both known and unknown. Addition of 8,300 new homes to San Carlos, as anticipated in the General Plan, will undoubtedly have an impact on District enrollment.

As stated above, Carlmont High is already exceeding its capacity. The General Plan's projected level of development may exacerbate this issue.

5. *What are the student generation rates the District uses to determine enrollment projections?*

As stated above, enrollment projections are uncertain. However, the Residential Development Research Report prepared by PowerSchool for Fall 2024, dated September 15, 2023, identified student generation rates of .14 for single family detached units, .09 for single family attached units, and .10 for multi-family units. A copy of the report is enclosed with this letter.

We note that the PowerSchool report was submitted on September 23, 2023, when anticipated potential development was 3,805 residential units in the *entire* District over the next ten (10) years. Given that the General Plan is anticipating 8,300 homes in San Carlos *alone* over the next twenty (20) years, the District may need to reevaluate projections based on the aggressive growth that the City of San Carlos now anticipates.

6. *Are there any plans for new or expanded school facilities? If so, where, to what extent, and when are the expanded or new facilities expected to commence?*

The District's 2023 Facilities Master Plan identifies plans for a new T-Wing, Terrace Building, and Administrative/Student Support Building at Carlmont High, as well as renovation, modernization, and other site projects for that site. For Sequoia High, the Master Plan anticipates a new classroom building and modernization of existing buildings. (See: <https://www.seq.org/DEPARTMENTS/Administrative-Services/Construction/Facilities-Master-Plan/index.html>.) Construction is still in the planning stage.

In order to accommodate students generated by 8,300 new homes, it is likely that the District will be required to construct new facilities or expand existing facilities, and also to modernize existing facilities to maintain the existing level of service.

7. *Please provide any current documents on school services including background reports, policy documents, and facility plans that you think would help with preparing the environmental review analysis for impacts to school facilities as a result of the proposed 2045 General Plan Reset.*

In addition to the link to the Board Agenda on item for March 6, 2024, that was previously provided, the following documents are identified:

- Facilities Master Plan, Sequoia Union High School District (updated September 18, 2023), available at:  
[https://drive.google.com/file/d/14TDfrmql5JL\\_hyY5rvijXM0bR7\\_9yC6A/view](https://drive.google.com/file/d/14TDfrmql5JL_hyY5rvijXM0bR7_9yC6A/view)
- Sequoia Union High School District, Resolution No. 011, Increase in School Facilities Fees and Adoption of CEQA Notice of Exemption, available at:  
<https://www.seq.org/documents/Departments/Admin%20Services/Maintenance%20and%20Operations/Resolutions%20and%20Justification%20Reports/RESOLUTION-No.-011-INCREASE-IN-SCHOOL-FACILITIES-FEES-AND-ADOPTION-OF-CEQA-NOTICE-OF-EXEMPTION-3-6-24.pdf>
- Level I Developer Fee Study for Sequoia Union High School District, prepared by Jack Schreder & Associates on January 29, 2024, available at:  
<https://www.seq.org/documents/Departments/Admin%20Services/Maintenance%20and%20Operations/Resolutions%20and%20Justification%20Reports/Developer-Fee-Justification-Study-March-2024.pdf>
- Residential Development Research Report prepared by PowerSchool for Fall 2024, dated September 15, 2023 (enclosed)

Madeline Miller  
October 18, 2024  
Page 6

Thank you for your consideration of the District's concerns. While we appreciate your effort to collect information from the District, the issues you are investigating are complex. Rather than exchanging emails and answering lists of questions, we suggest that it would be far more beneficial if we could have a meeting with the City of San Carlos, developers, and their respective consultants to speak about these issues and develop a fuller understanding of the District's needs and the effects of the General Plan. We would be happy to coordinate such a meeting.

Sincerely,

LOZANO SMITH

A handwritten signature in blue ink that reads "Kelly M. Rem". The signature is fluid and cursive, with the first name "Kelly" being more prominent than the last name "Rem".

KMR/KRB/mag

cc: Alexis Mena ( [REDACTED] )  
Akanksha Chopra ( [REDACTED] )  
Lisa Porras ( [REDACTED] )  
Crystal Leach, Superintendent ( [REDACTED] )  
Christine Gong, Assistant Superintendent, Admin. Services/CBO ( [REDACTED] )

Enclosure: Residential Development Research Report

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# RESIDENTIAL DEVELOPMENT RESEARCH REPORT

FALL 2024

PREPARED FOR:  
SEQUOIA UNION HIGH SCHOOL DISTRICT

PREPARED BY:  
The logo for PowerSchool, featuring a stylized blue 'P' icon followed by the word 'PowerSchool' in a blue sans-serif font.

SUBMITTED: SEPTEMBER 15, 2023

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# SEQUOIA UNION HIGH SCHOOL DISTRICT

## EXECUTIVE SUMMARY

### NEW RESIDENTIAL DEVELOPMENT – FALL 2024

Predictive Enrollment Analytics is pleased to present this report of findings to the Sequoia Union High School District. Based on information collected from the local planning department(s) and developer(s) as of Sep-23, it is anticipated that the district could potentially experience the construction and occupation of 3,805 new dwelling units over the next 10 years. This total unit count includes 103 Single Family Detached units, 421 Single Family Attached units, and 3,281 Multifamily units.

### STUDENT GENERATION RATE ASSUMPTIONS

The student generation rates applied to these projections are our default rates, which have been prepared based on a comprehensive review of recently-constructed dwelling units with similar characteristics. The total across all grade ranges for the district (9-12), is 0.14 for Single Family Detached units, 0.09 for Single Family Attached units, and 0.10 for Multifamily units.

### ANTICIPATED IMPACT OF NEW RESIDENTIAL DEVELOPMENT

Both a Moderate and Conservative Dwelling Unit ("DU") Scenario have been generated for the district. The 10-year projection of 9-12 students generated by proposed new residential development for the Moderate and Conservative DU Scenarios are shown in the tables below. The "Annual" row projects the number of students new to the district from these units, in a given year. The "Aggregate" row reflects both new students in a given year plus the matriculation of previous years' students from one grade to the next (this number removes students who will have matriculated out of the district).

Students Generated by Residential Development (Moderate DU Scenario)										
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Aggregate		142	234	272	312	336	351	346	343	349
Annual	55	93	116	87	110	101	104	85	89	90

Students Generated by Residential Development (Conservative DU Scenario)										
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Aggregate		122	202	251	297	326	340	348	346	349
Annual	45	82	100	92	107	102	99	96	88	90

### MORE INFORMATION

A richer and more comprehensive review is contained in the Residential Development Research Report accompanying this Executive Summary. A wealth of more detailed information and analysis is also quickly and easily accessible online.

Respectfully Prepared and Submitted by:

The **Predictive Enrollment Analytics** Team

September 15, 2023

# SEQUOIA UNION HIGH SCHOOL DISTRICT

## RESIDENTIAL DEVELOPMENT RESEARCH METHODOLOGY AND DATA

### RESEARCH METHODOLOGY

The residential research team works with the school district's local planning department(s) to compile a list of all active residential development projects within the district. When putting together this list of projects, we include only active, non-senior residential projects larger than 10 units. We believe this to be the most efficient way to build a picture of the district's future residential changes, since smaller projects would generally have a negligible impact on the district. These active projects would include developments either currently under construction, those with active entitlements, or any proposed future projects.

We then follow up with developers to gather as much information as possible on the project's unit type(s), planned build-out unit counts, construction schedules, etc. From these data, we create two scenarios. The Moderate DU Scenario is directly based on information provided by the planning departments and developers regarding anticipated construction schedules and unit occupancies. The Conservative DU Scenario is derived from the Moderate's by assuming occupancies will occur over a longer period. Because of this, the unit totals in the Conservative DU Scenario may be less than those of the Moderate DU Scenario if they are pushed out beyond the next 10 years. Similarly, because of these adjustments, in any given year it may also be possible for the annual number totals of the Conservative DU Scenario to exceed those of the Moderate DU Scenario.

### DWELLING UNIT TYPES

New dwelling units are categorized into the following three (3) housing types:

- **Single Family Detached ("SFD")** – Units are stand-alone structures on their own lot with a unique Assessor's parcel number.
- **Single Family Attached ("SFA")** – Units share common walls, usually on both sides of the property, where each is assigned a unique Assessor's parcel number (e.g., townhomes, condominiums, duplexes).
- **Multifamily ("MF")** – Units share common walls in a building or structure designed to house several families in separate housing units. All units are on the same lot with one Assessor's parcel number (e.g., apartments).

## ACTIVE RESIDENTIAL DEVELOPMENT PROJECTS WITHIN THE DISTRICT

Based on information collected from the local planning department(s) and developer(s) as of Sep-23, it is anticipated that the district could potentially experience the construction and occupation of 3,805 new dwelling units over the next 10 years. The total unit count included in the Moderate DU Scenario is broken out as shown in the table below.

New Dwelling Units by Unit Type	
Unit Type	# of Units
Single Family Detached	103
Single Family Attached	421
Multifamily	3,281
Totals:	3,805

FIGURE 1

The two tables below provide the project name, unit type, and anticipated occupancy data for all active, non-senior residential development projects greater than 10 units planned to be occupied over the next 10 years.

This table shows the Moderate DU Scenario which is directly based on information provided by the planning departments and developers regarding anticipated construction schedules and unit occupancies.

Proposed Dwelling Units within the Sequoia Union High School District (Moderate DU Scenario)												
Project Name	Unit Type	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
11 El Camino Rea	MF	0	109	133	0	0	0	0	0	0	0	242
111 Independence Dr.	MF	0	0	50	55	0	0	0	0	0	0	105
1383 Laurel Street	MF	0	15	0	0	0	0	0	0	0	0	15
201 El Camino Real	MF	0	0	12	0	0	0	0	0	0	0	12
560 El Camino Real	MF	0	24	0	0	0	0	0	0	0	0	24
60 Vista Del Grande	SFA	0	0	89	0	0	0	0	0	0	0	89
808 Alameda de Las Pulgas	SFD	0	87	0	0	0	0	0	0	0	0	87
847 Woodside	MF	0	0	0	0	22	22	0	0	0	0	44
Broadway Plaza	MF	0	260	260	0	0	0	0	0	0	0	520
Charter Street	MF	0	36	36	0	0	0	0	0	0	0	72
Laurel Way Subdivision	SFD	0	0	0	16	0	0	0	0	0	0	16
Menlo Flats	MF	0	0	0	0	50	50	50	0	0	0	150
Menlo Portal	MF	75	75	75	35	0	0	0	0	0	0	260
Menlo Uptown	SFA	14	14	0	0	0	0	0	0	0	0	28
Menlo Uptown	MF	221	0	0	0	0	0	0	0	0	0	221
MidPen	MF	90	0	0	0	0	0	0	0	0	0	90
Parkline	SFA	0	0	0	0	50	50	0	0	0	0	100
Parkline	MF	0	0	0	0	100	100	100	0	0	0	300
Sobrato	SFA	0	0	0	0	60	56	0	0	0	0	116
Sobrato	MF	0	0	0	0	100	100	116	0	0	0	316
South Main Mixed-Use	MF	110	110	110	100	0	0	0	0	0	0	430
Strada	SFA	43	45	0	0	0	0	0	0	0	0	88
Syufy Site	MF	0	0	160	160	160	0	0	0	0	0	480
Totals:		553	775	925	366	542	378	266	0	0	0	3805

FIGURE 2



This table shows the Conservative DU Scenario which is derived from the Moderate's by assuming occupancies will occur over a longer period.

Proposed Dwelling Units within the Sequoia Union High School District (Conservative DU Scenario)												
Project Name	Unit Type	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
11 El Camino Rea	MF	0	99	113	30	0	0	0	0	0	0	242
111 Independence Dr.	MF	0	0	40	44	21	0	0	0	0	0	105
1383 Laurel Street	MF	0	12	3	0	0	0	0	0	0	0	15
201 El Camino Real	MF	0	0	10	2	0	0	0	0	0	0	12
560 El Camino Real	MF	0	20	4	0	0	0	0	0	0	0	24
60 Vista Del Grande	SFA	0	0	79	10	0	0	0	0	0	0	89
808 Alameda de Las Pulgas	SFD	0	77	10	0	0	0	0	0	0	0	87
847 Woodside	MF	0	0	0	0	18	18	8	0	0	0	44
Broadway Plaza	MF	0	208	208	104	0	0	0	0	0	0	520
Charter Street	MF	0	29	29	14	0	0	0	0	0	0	72
Laurel Way Subdivision	SFD	0	0	0	13	3	0	0	0	0	0	16
Menlo Flats	MF	0	0	0	0	40	40	40	30	0	0	150
Menlo Portal	MF	60	60	60	60	20	0	0	0	0	0	260
Menlo Uptown	SFA	11	11	6	0	0	0	0	0	0	0	28
Menlo Uptown	MF	177	44	0	0	0	0	0	0	0	0	221
MidPen	MF	80	10	0	0	0	0	0	0	0	0	90
Parkline	SFA	0	0	0	0	40	40	20	0	0	0	100
Parkline	MF	0	0	0	0	80	80	80	60	0	0	300
Sobrato	SFA	0	0	0	0	48	48	20	0	0	0	116
Sobrato	MF	0	0	0	0	80	80	93	63	0	0	316
South Main Mixed-Use	MF	88	88	88	88	78	0	0	0	0	0	430
Strada	SFA	34	36	18	0	0	0	0	0	0	0	88
Syufy Site	MF	0	0	128	128	128	96	0	0	0	0	480
Totals:		450	694	796	493	556	402	261	153	0	0	3805

FIGURE 3

The graph below shows the anticipated occupancy data accumulated by year for all active, non-senior residential development projects greater than 10 units planned to be occupied over the next 10 years.

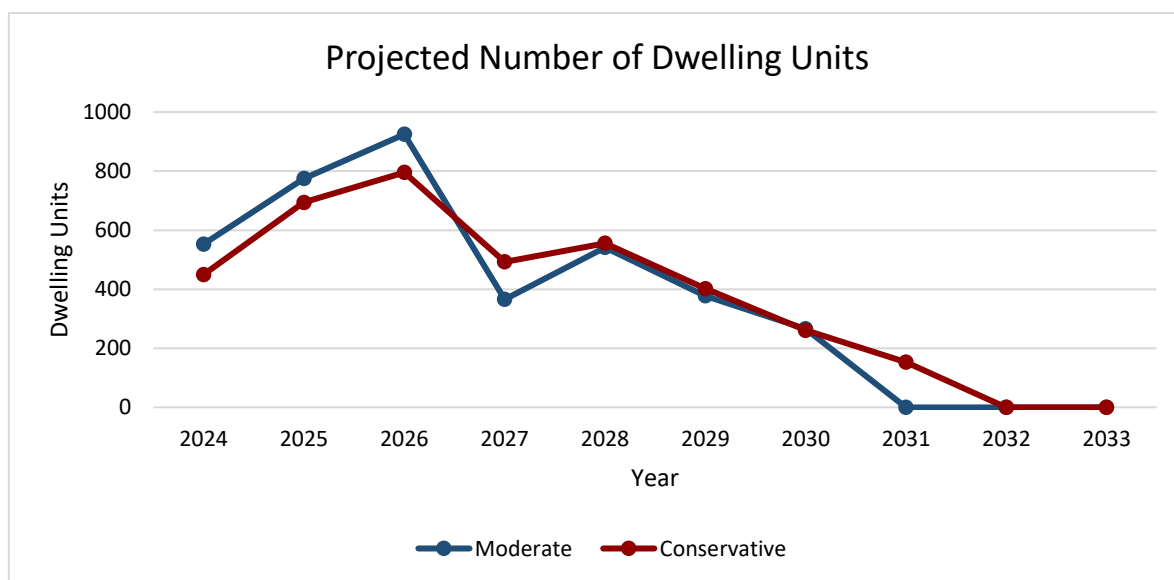


FIGURE 4

The locations of each of these future residential development projects is shown in the map below. Please note that the exact location of these new development projects may be refined as additional information is made available.

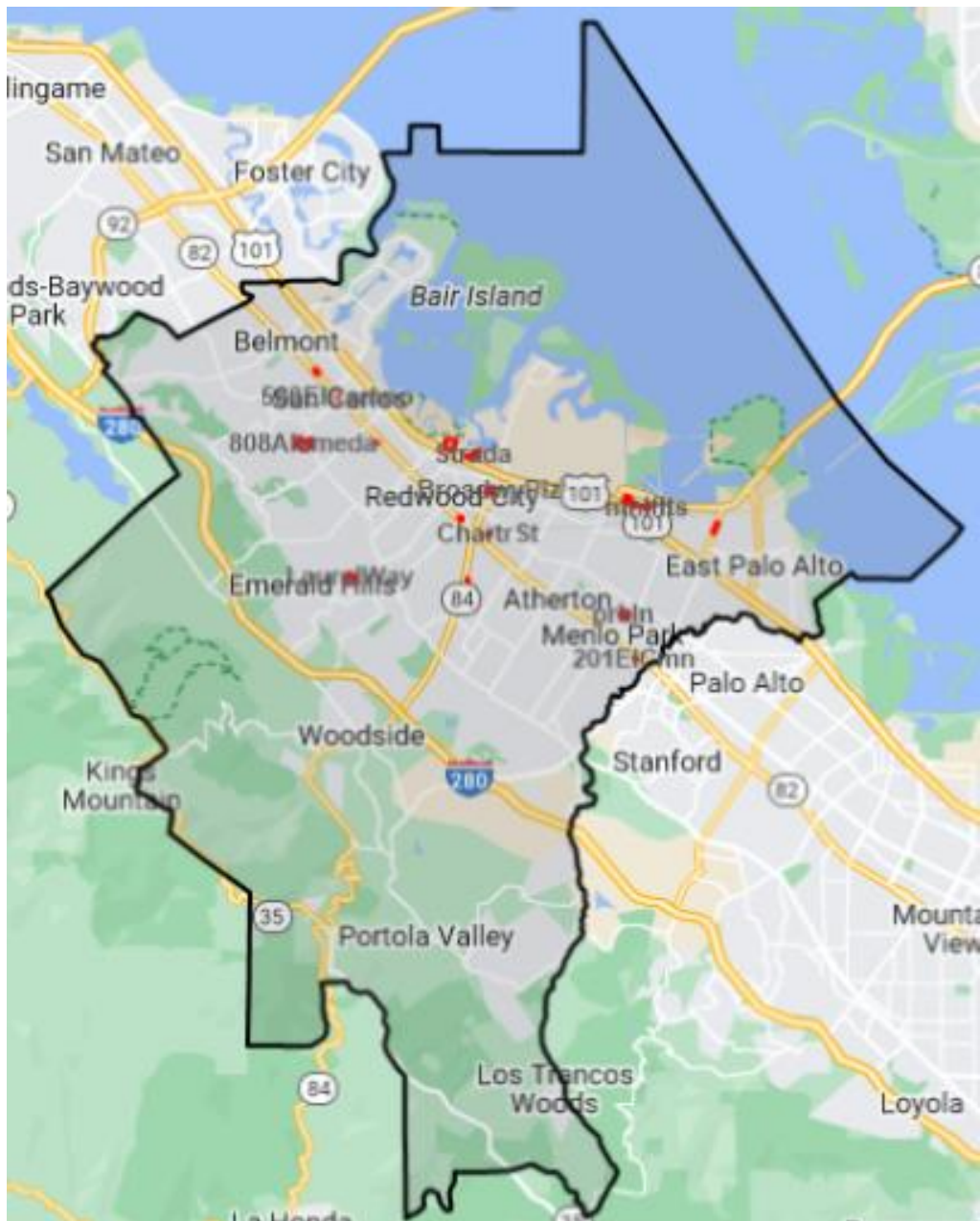


FIGURE 5

## STUDENT GENERATION RATE ASSUMPTIONS

Student generation rates are determined for each dwelling unit type for each school level (elementary, middle, and high where applicable). The student generation rates applied to these projections are our default rates, which have been prepared based on a comprehensive review of recently-constructed dwelling units with similar characteristics. The table below shows the student generation rate assumptions by unit type. Although these student generation rates are broken out by a 9-12 grade configuration, the calculated student impact from new development within the enrollment projection studies will be aligned with each school's defined grade configurations.

Student Generation Rates by Unit Type & School Level			
School Level	SFD Units	SFA Units	MF Units
High School (9-12)	0.14	0.09	0.10
Totals:	0.14	0.09	0.10

FIGURE 6

Typically, the Conservative rates are calculated as a slight adjustment down from the Moderate rates to anticipate a diminution in family size over an extended period. A full list of the student generation rates applied over the next 10 years within the Moderate and Conservative DU Scenarios is shown in Appendix A.

## PROJECTED STUDENTS FROM NEW RESIDENTIAL DEVELOPMENT

To calculate the projected student enrollment from the new residential development planned within the district, the number of each unit type was multiplied by the appropriate student generation rates for each of the next 10 years. The geographical location of each project is utilized to calculate the student impact by studyblock, which ultimately determines which schools we would anticipate being impacted. For each school level, students generated by new residential development are distributed across grade levels. These percentages are based on historical patterns where they exist; otherwise, default percentages are used. Furthermore, student matriculation is considered to accurately model the student impact over the enrollment projections studies' 10-year timeframe. The results of these operations for the Moderate and Conservative DU Scenarios are shown in the tables below.

Projected Students from New Residential Development (Moderate DU Scenario)										
Grade	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
9	16	37	58	61	73	76	85	85	89	90
10	16	41	62	69	77	84	84	85	85	89
11	16	41	66	73	85	88	92	84	85	85
12	5	24	49	69	78	89	91	92	84	85
High:	55	142	234	272	312	336	351	346	343	349
Total:	55	142	234	272	312	336	351	346	343	349

FIGURE 7

Projected Students from New Residential Development (Conservative DU Scenario)										
Grade	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
9	13	32	50	58	69	74	81	86	88	90
10	13	35	53	64	74	81	82	86	86	88
11	13	35	57	68	81	86	88	87	86	86
12	4	21	42	61	73	85	89	90	87	86
High:	45	122	202	251	297	326	340	348	346	349
Total:	45	122	202	251	297	326	340	348	346	349

FIGURE 8

The graph below shows the projected student enrollment from the new residential development within the Moderate and Conservative DU Scenarios. More detailed information on the projected numbers of students generated by project and by studyblock can be accessed online.

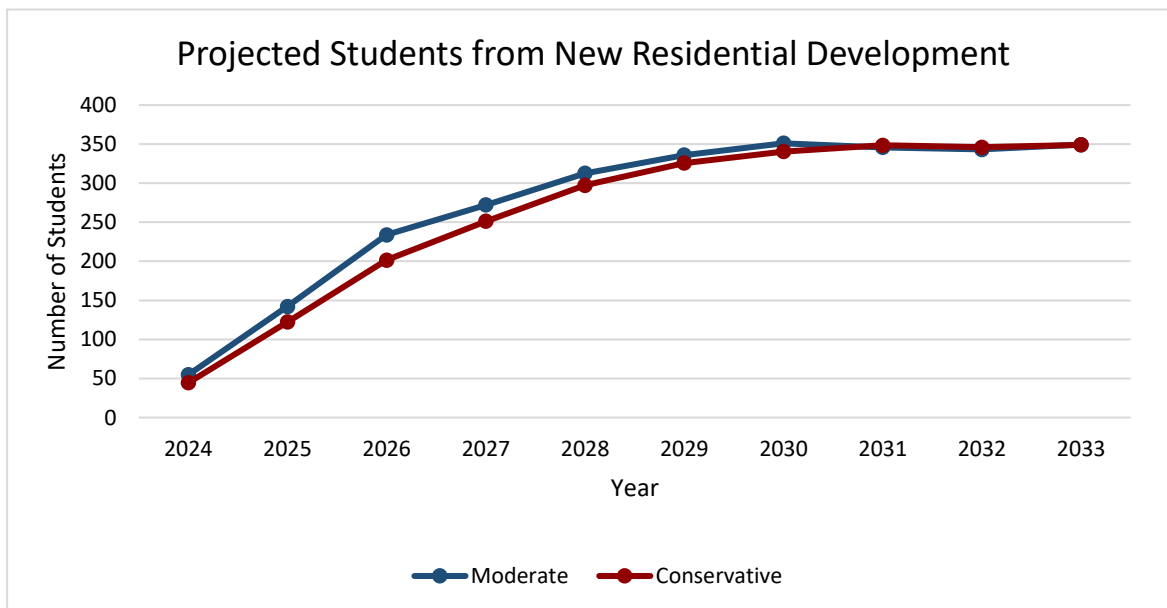


FIGURE 9

## ANALYZING/STUDYING/REVIEWING THE RESIDENTIAL DEVELOPMENT RESEARCH REPORT

The projections of district and school enrollment are based on a complex mix of historical data, recent trends, and specific assumptions regarding the future, including new residential development as outlined in this report. At Predictive Enrollment Analytics, we strongly encourage our clients to actively engage with the data with the aim of better understanding, further refining, and using the results to inform decisions about to be made. We believe increased effectiveness for both the district and Predictive Enrollment Analytics comes with increased and welcome dialogue.

Graphs or tables may be copied from the PDF version of this document using the Snapshot Tool inside PDF Reader.

Please do not hesitate to contact Predictive Enrollment Analytics regarding any questions or suggestions that may arise regarding this report.

Respectfully Prepared and Submitted by:

The **Predictive Enrollment Analytics** Team

September 15, 2023

## APPENDIX A

### STUDENT GENERATION RATE ASSUMPTIONS

Student Generation Rates (Moderate DU Scenario)											
Unit Type	School Level	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
SFD	Elementary	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
SFD	Middle	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
SFD	High	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
SFA	Elementary	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
SFA	Middle	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
SFA	High	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
MF	Elementary	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
MF	Middle	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
MF	High	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

Student Generation Rates (Conservative DU Scenario)											
Unit Type	School Level	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
SFD	Elementary	0.33	0.33	0.33	0.32	0.32	0.32	0.32	0.32	0.32	0.31
SFD	Middle	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
SFD	High	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13
SFA	Elementary	0.23	0.23	0.23	0.23	0.23	0.22	0.22	0.22	0.22	0.22
SFA	Middle	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
SFA	High	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
MF	Elementary	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14
MF	Middle	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
MF	High	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

- a. Approval of the June 17, 2024 Planning and Transportation Commission Meeting Minutes



**San Carlos City Planning and Transportation Commission**  
**Regular Meeting**  
**Council Chambers, City Hall**  
**600 Elm Street, San Carlos, CA 94070**  
**June 17, 2024 7:00 PM**

**MINUTES**

1. CALL TO ORDER – Call to order at 7:00 pm
2. ASSEMBLY BILL 2449 TELECONFERENCE REQUESTS - None
3. PLEDGE OF ALLEGIANCE

4. ROLL CALL

Commissioners Present:

Ellen Garvey (Acting Chair)  
Janet Castaneda  
David Roof

Commissioners Absent

Jim Iacoponi, Chair  
Kristen Clements, Vice Chair

Staff Present:

Andrea Mardesich, Assistant Community Development Director  
Lisa Porras, Planning Manager  
Rucha Dande, Principal Planner  
Akanksha Chopra, Associate Planner  
Lisa Costa Sanders, Consultant Principal Planner  
Greg Rubens, City Attorney

5. APPROVAL OF MINUTES

- a Approval of the June 3, 2024 Planning and Transportation Commission (PTC) Meeting Minutes.

<b>MOTION:</b>	Approve the Minutes from the Planning and Transportation Commission Meeting of June 3, 2024.
<b>MOVER:</b>	Ellen Garvey
<b>SECONDER:</b>	Janet Castaneda
<b>AYES:</b>	Roof, Garvey, Castaneda
<b>NAYS:</b>	None
<b>ABSENT:</b>	Kristen Clement, Jim Iacoponi
<b>RESULT:</b>	Motion Passed 3 – 0 – 2

6. PUBLIC HEARING

- a. 642 Quarry Road (APN:046-041-038) – Public Hearing to Consider approving the Design Review Modification, to modify the design of an approved but not yet built life science research and development buildings.



Lisa Costa Sanders, Consultant Principal Planner and Applicant Rex Crabb from OTJ Architects presented the item.

Commissioners asked clarifying questions.

City staff and Consultant Team addressed the Commission's inquiries.

### Public Comment

Nels Delander (in-person), representative of Carpenters Local 217, emphasized that workers on this project should receive fair wages, proper training through apprenticeships, and healthcare benefits.

Debbie Baldocchi (via Zoom), a San Carlos resident, sought the Commissioners' perspectives on the parking lot structure before and after the proposed design changes.

<b>MOTION:</b>	Close Public Comment
<b>MOVER:</b>	Janet Castaneda
<b>SECONDER:</b>	David Roof
<b>AYES:</b>	Roof, Castaneda, Garvey
<b>NAYS:</b>	None
<b>ABSENT:</b>	Kristen Clements, Jim Iacoponi
<b>RESULT:</b>	Motion Passed 3 – 0 – 2

### Commission Comment

Commissioner Garvey invited the applicant to respond to the caller's question regarding the art wall on parking lot structure.

The Commission was supportive of the design changes and liked the simplified design and planter boxes.

<b>MOTION:</b>	Approve the request for Design Review Modification, for the construction of construction of two research and development life science buildings, one 215,022 square feet and one 192,650 square feet, (both buildings with six floors), and one parking garage with nine floors above grade and one subsurface level at 642 Quarry Road based on the findings and for the reasons incorporated in the staff report and subsequent attachments.
<b>MOVER:</b>	David Roof
<b>SECONDER:</b>	Janet Castaneda
<b>AYES:</b>	Roof, Castaneda, Garvey
<b>NAYS:</b>	None
<b>ABSENT:</b>	Kristen Clement, Jim Iacoponi
<b>RESULT:</b>	Motion Passed 3 – 0 – 2

Commissioner Garvey stated that The Planning and Transportation Commission's action will be final unless appealed to the City Council within 10 days of the date of action. The deadline to file an appeal is 5:00 p.m. on Thursday, June 27, 2024.

- b. Scoping Meeting for the 2045 General Plan Reset Environmental Impact Report (EIR).

Akanksha Chopra, Associate Planner and Terri McCracken, Consultant Associate Principal from PlaceWorks presented the item.

### Public Comment

Debbie Baldocchi (via Zoom) expressed her concerns about the numerous life science developments and requested that the EIR address hazardous materials, including biohazards, water quality and soil. She emphasized the need for the City to consider the energy and water usage and the risks associated with the concentrated use of biosafety labs.

<b>MOTION:</b>	Close Public Comment
<b>MOVER:</b>	Ellen Garvey
<b>SECONDER:</b>	Janet Castaneda
<b>AYES:</b>	Roof, Castaneda, Garvey
<b>NAYS:</b>	None
<b>ABSENT:</b>	Kristen Clements, Jim Iacoponi
<b>RESULT:</b>	Motion Passed 3 – 0 – 2

Greg Rubens clarified that the public comment period was for the evening only. He stated that there is still the public comment period for the scoping of the EIR and the public still has the opportunity to communicate with staff and provide input.

Commissioners asked clarifying questions.

Commissioner Garvey requested that the EIR thoroughly evaluate developments near creeks, especially in the Northeast area.

Commissioner Roof emphasized the need for review of wildfire related impacts with respect to potential congestion and evacuation from potential new development in San Carlos.

City staff and consultant addressed the Commission's inquiries.

## 7. NEW BUSINESS

- a. Consider Authorizing a Planning and Transportation Commission Summer Recess and Cancellation of the July 1, 2024 and July 15, 2024 Regular Meetings.

### Public Comment

Debbie Baldocchi (via Zoom) thanked the Commission for their hard work throughout the year and supported the motion.

<b>MOTION:</b>	Approve a summer recess and authorizes cancellation of the July 1, 2024 and July 15, 2024 Regular Meetings.
<b>MOVER:</b>	Janet Castaneda
<b>SECONDER:</b>	Ellen Garvey
<b>AYES:</b>	Roof, Castaneda, Garvey
<b>NAYS:</b>	None
<b>ABSENT:</b>	Kristen Clements, Jim Iacoponi
<b>RESULT:</b>	Motion Passed 3 – 0 – 2

## 8. STUDY SESSION

- a. Study Session on Objective Design Standards for Multifamily (RM) and Mixed use (MU) Development Types.

Rucha Dande, Principal Planner and Rick Williams, Consultant Principal Architect and Urban Designer from Van Meter Williams Pollack presented the item.

### Public Comment

Debbie Baldocchi (via Zoom) commented that the Multi-family Objective Design Standards process seems to be undoing the height restrictions, setbacks, and step backs established for single-family homes in the Housing Element. She urged City Staff to be meticulous when making required findings, particularly concerning sites with pre-existing restrictions, such as 1785 San Carlos Avenue due to its proximity to the creek.

Debbie Baldocchi also mentioned that the Greater East Side San Carlos neighborhood spoke in great numbers about step backs and setbacks for multifamily buildings facing their single-family homes. She asked if all their input would be disregarded and replaced by new standards that are less favorable to single-family homeowners.

Lisa Porras, Planning Manager addressed the public comment on the Housing Element.

Rick Williams followed up on the public comment

### Commission Comment

Commissioners asked clarifying questions.

Commissioner Roof emphasized the need for proposed changes and implications to be openly discussed with the public.

Commissioner Garvey echoed Commissioner Roof's comment, stating the importance of making information available to the community for review and comment. She emphasized the need to invite the community to stay engaged with the subject through various outreach tools.

Commissioner Castaneda mentioned that while the market suggests a demand for larger units, there is also a trend in many areas towards smaller units. She urged City Staff to keep this in mind.

City staff and consultant addressed the Commission's inquiries.

## 9. REPORTS, CORRESPONDENCE AND GENERAL INFORMATION

### a. Report on Recent City Council Actions

Andrea Mardesich, Assistant Community Development Director shared that the City Council provided feedback to staff on the Downtown Streetscape Plan and authorized to move forward with some technical studies. She also shared that the Council approved the mid-year budget.

### b. Planning and Transportation Commission comments or reports

Commissioner Garvey noted that the evening was Commissioner Roof's last meeting and thanked him for his service.

### c. Correspondence - None

### d. Planning Staff comments, reports, and updates on current projects

Andrea Mardesich provided the following updates.

- There will be no meetings in July.
- Staff is determining if there is a quorum for the August 5, Planning and Transportation Commission (PTC) meeting.
- Thanked Commissioner Roof for his 6 years of service in PTC and Residential Design Review Committee.

## 10. PUBLIC COMMENTS

Debbie Baldocchi (via Zoom) thanked Commissioner Roof for representing the community.

## 11. ADJOURNMENT – The meeting was adjourned at 9:31 pm

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Andrea Mardesich, Assistant  
Community Development Director

APPENDIX B:  
AIR QUALITY AND GREENHOUSE  
GAS EMISSIONS DATA



Land Use Statistics - City of San Carlos

	Existing Conditions	Buildout Estimates	Projected Growth (Proposed Project)	Growth Factor from Existing to Horizon Year	Annual Growth Rate 2024-2045
	2024	2045	2024-2045	2045	Percent (%)
City + Sphere of Influence (SOI)					
Housing Units	13,250	21,560	8,310	63%	0.023
Population	30,830	46,450	15,620	51%	0.020
Employment	20,780	47,320	26,540	128%	0.040
Service Population	51,610	93,770	42,160	82%	0.029
City					
Housing Units	12,460	20,770	8,310	67%	0.025
Population	28,890	44,510	15,620	54%	0.021
Employment	20,410	46,950	26,540	130%	0.040
Service Population	49,300	91,460	42,160	86%	0.030
Sphere of Influence (SOI)					
Housing Units	790	790	0	0%	0.000
Population	1,940	1,940	0	0%	0.000
Employment	370	370	0	0%	0.000
Service Population	2,310	2,310	0	0%	0.000

City of San Carlos Community Criteria Air Pollutant Emissions Inventory and Forecast: City + SOI

Notes:  
<sup>1</sup> Source: Kittelson and Associates, Inc. 2024; EMFAC2021 Version 1.0.2 Emissions Database (Region - San Mateo County)  
<sup>2</sup> Sources: PG&E and PCE 2024 and CalEEMod User's Guide for natural gas criteria air pollutant emission rates. Excludes criteria air pollutant emissions natural gas use from Permitted Sources within the City.  
<sup>3</sup> Source: OFFROAD 2021  
<sup>4</sup> Source: CalEEMod User's Guide

City + SOI								
EXISTING (2024)								
Phase	Existing Criteria Air Pollutant Emissions (lbs/day)				Existing Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	26	168	37	14	5	29	6	2
Energy <sup>2</sup>	11	211	16	16	2	39	3	3
Offroad Equipment <sup>3</sup>	144	89	4	3	26	16	1	1
Consumer Products <sup>4</sup>	586				107			
Total	767	469	57	32	140	84	10	6

EXISTING (2045 No Project Baseline)								
Phase	Existing Criteria Air Pollutant Emissions (lbs/day)				Existing Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	19	89	50	17	3	15	9	3
Energy <sup>2</sup>	19	363	27	27	4	66	5	5
Offroad Equipment <sup>3</sup>	295	198	6	4	54	36	1	1
Consumer Products <sup>4</sup>	1,022				187			
Total	1,355	650	84	48	247	118	15	9

Year 2045 (Proposed Project)								
Phase	Project (2045) Criteria Air Pollutant Emissions (lbs/day)				Project (2045) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	23	109	62	21	4	19	11	4
Energy <sup>2</sup>	19	363	27	27	4	66	5	5
Offroad Equipment <sup>3</sup>	295	198	6	4	54	36	1	1
Consumer Products <sup>4</sup>	1,022				187			
Total	1,359	670	95	52	248	121	17	9

NET CHANGE (from 2045 No Project Baseline)								
Phase	Net Change (2045-2024) Criteria Air Pollutant Emissions (lbs/day)				Net Change (2045-2024) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	4	20	11	4	1	4	2	1
Energy <sup>2</sup>	0	0	0	0	0	0	0	0
Offroad Equipment <sup>3</sup>	0	0	0	0	0	0	0	0
Consumer Products <sup>4</sup>	0	0	0	0	0	0	0	0
Total	4	20	11	4	1	4	2	1
BAAQMD Threshold	54	54	82	54	10	10	15	10
Exceeds Threshold	No	No	No	No	No	No	No	No

NET CHANGE (from Existing) - Friant Ranch								
Phase	Net Change (2045-2024) Criteria Air Pollutant Emissions (lbs/day)				Net Change (2045-2024) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	-3	-59	24	7	-1	-10	4	1
Energy <sup>2</sup>	8	151	11	11	1	28	2	2
Offroad Equipment <sup>3</sup>	151	109	2	1	28	20	0	0
Consumer Products <sup>4</sup>	437				80			
Total	593	202	38	19	108	37	7	3
BAAQMD Threshold	54	54	82	54	10	10	15	10
Exceeds Threshold	Yes	Yes	No	No	Yes	Yes	No	No



## AQMP Consistency Analysis

### Comparison of the Change in Population and VMT in San Carlos (O-D Method)

Category	Existing	GP 2045 Update (Proposed Project)	Change from Existing	
			Change	Percent
Population	30,830	46,450	15,620	50.7%
Employment	20,780	47,320	26,540	127.7%
SP	51,610	93,770	42,160	81.7%
VMT per Day	773,123	1,335,160	562,037	72.7%
VMT/SP	14.98	14.24	-0.74	-4.9%

Note Origin-Destination (O-D) Methodology is not necessarily the same methodology for SB 743.

Modeling of vehicle miles traveled (VMT) is provided by Kittelson and Associates, Inc. 2024. VMT from passenger vehicles and trucks that have an origin or destination in the City using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under Senate Bill 375 (SB 375).

For accounting purposes, there are three types of trips:

- » Vehicle trips that originated and terminated within the City (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.
- » Vehicle trips that either originated or terminated (but not both) within the City (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.
- » Vehicle trips that neither originated nor terminated within the City. 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's VMT or emissions.

Area Sources - Residential Consumer Products<sup>a</sup>

Emissions = EF x Building Area

EF = 2.14E-05 lbs/sqft/day

Sources/Notes:

a. California Emissions Estimator Model, Version 2021.1, Users Guide, Appendix D3.

AVERAGE HOUSING SQFT ASSUMPTIONS

Year Structure was Built	Percent of Housing Stock <sup>a</sup>	Average Square Feet of New Single Family Homes <sup>b</sup>	Average Square Feet (Weighted)
2020 or Later	0.4%	2,456	10
2010 to 2019	5.6%	2,549	143
2000 to 2009	11.0%	2,611	287
1990 to 1999	10.6%	2,348	249
1980 to 1989	15.0%	2,058	309
1979 or earlier	57.5%	1,857	1,068
	100%		2,065

Sources/Notes:

<https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>

a. United States Census Bureau, Selected Housing Characteristics, County of San Mateo, 2024, Table DP04. 2022 American Community Survey 5-Year Estimate [https://data.census.gov/table/ACSDPSY2022\\_DP04?g=040X000US06\\_050X000US06081&tid=ACSDPSY2022\\_DP04](https://data.census.gov/table/ACSDPSY2022_DP04?g=040X000US06_050X000US06081&tid=ACSDPSY2022_DP04)

b. United States Census Bureau, Characteristics of New Housing, Characteristics of New Single-Family Houses Completed, Median and Average Square Feet by Location. <https://www.census.gov/construction/char1/completed.html>.

	Existing 2024	2045 GP Update
	EIR Study Area	EIR Study Area
Housing Units	13,250	21,560
Residential SQFT	27,362,818	47,770,101
lbs VOC per day	586	1,022
tons VOC per year	107	187

Notes:

<sup>1</sup> New housing units constructed post-2020 assumed to be 2,456 square feet (based on Source b).

<sup>2</sup> Daily emissions converted to annual emissions by multiplying by 365 days/year.

## Average Square feet of Floor Area in Single-Family Houses Completed - West

United States Census Bureau, Characteristics of New Housing, Characteristics of New Single-Family Houses Completed, Median and Average Square Feet by Location. <https://www.census.gov/construction/chars/completed.html>.

<b>1979 or Earlier</b>	<b>1,857</b>
1973	1,895
1974	1,795
1975	1,715
1976	1,865
1977	1,875
1978	1,965
1979	1,890
<b>1980 to 1989</b>	<b>2,058</b>
1980	1,905
1981	1,965
1982	1,945
1983	2,025
1984	2,040
1985	2,090
1986	2,110
1987	2,095
1988	2,120
1989	2,280
<b>1990 to 1999</b>	<b>2,348</b>
1990	2,350
1991	2,340
1992	2,245
1993	2,265
1994	2,230
1995	2,380
1996	2,245
1997	2,405
1998	2,410
1999	2,613
<b>2000 to 2009</b>	<b>2,611</b>
2000	2,432
2001	2,491
2002	2,575
2003	2,587
2004	2,536
2005	2,697
2006	2,687
2007	2,840
2008	2,604
2009	2,656
<b>2010 to 2019</b>	<b>2,549</b>
2010	2,454

2011	2,289
2012	2,591
2013	2,574
2014	2,538
2015	2,615
2016	2,798
2017	2,531
2018	2,780
2019	2,319
<b>2020 and Later</b>	<b>2,456</b>
2020	2,204
2021	2,494
2022	2,600
2023	2,525

Area Sources

Source: OFFROAD2021, <https://arb.ca.gov/emfac/emissions-inventory/>

OFFROAD2021 Estimate based on:

Construction Equipment	Based on the percentage of total County Service Population Attributable to City (US Census Bureau 2024)
Lawn & Garden	Based on the percentage of total County Service Population Attributable to City (US Census Bureau 2024)
Light Commercial and Industrial Equipment	Based on the percentage of employment in San Carlos compared to San Mateo County (EDD 2024)

Construction (percentage of total County SP change attributable to City)

Source: Department of Finance E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024; and US Census Bureau, <https://ontheimap.ces.census.gov/>

Employment

Source: Employment Development Department, San Mateo County Profile, <https://labormarketinfo.edd.ca.gov/geography/sanmateo-county.html>.

2024 Existing		ROG Exhaust	NO <sub>x</sub> Exhaust	CO Exhaust	SO <sub>2</sub> Exhaust	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust*
		lbs/year					
Agricultural	No agricultural use in the EIR Study Area	0	0	0	0	0	0
Construction Equipment		7	14	194	0	2	2
Lawn & Garden		90	11	1,067	0	1	1
Light Commercial/ Industrial Equipment		47	63	2,216	0	1	1
TOTAL City+ SOI		144	89	3,577	0	4	3

Horizon Year 2045		ROG Exhaust	NO <sub>x</sub> Exhaust	CO Exhaust	SO <sub>2</sub> Exhaust	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Forecast Adjusted for:		lbs/year					
Agricultural	No agricultural use in the EIR Study Area at buildout	0	0	0	0	0	0
Construction Equipment	Similar to historic	9	10	242	0	2	2
Lawn & Garden	Proportional to housing growth	153	20	1,961	0	2	1
Light Commercial/ Industrial Equipment	Proportional to employment growth	133	168	6,596	0	3	1
TOTAL City+ SOI		295	198	8,799	0	6	4

**San Mateo County OFFROAD2021: Year 2024**  
Source: <https://arb.ca.gov/emfac/offroad/emissions-inventory/ac1e3a1dd06a5013c98eb0ec624495ddf9d9eb1a>  
Construction includes: Over 25 horsepower, self-propelled, diesel equipment only subjected to In-Use Regulation; AND Under 25 horsepower equipment not subject to the In-Use Regulation

Model Output: OFFROAD2021 (v1.0.7) Emissions Inventory  
Region Type: County  
Region: San Mateo  
Calendar Year: 2024  
Scenario: All Adopted Rules - Exhaust  
Vehicle Classification: OFFROAD2021 Equipment Types  
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Construction and Mining													
Region	CalYr	VehClass	MDtYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2.5_tpd	CO2_tpd	CO2e_MTY
San Mateo	2024	Construction and Mining - Bore/Drill Rigs	Aggregate	Aggregate	Diesel	2.46E-04	2.21E-03	1.74E-03	4.79E-06	9.44E-05	8.69E-05	0.51	167
San Mateo	2024	Construction and Mining - Cranes	Aggregate	Aggregate	Diesel	1.73E-04	1.75E-03	1.39E-03	4.40E-06	7.73E-05	7.11E-05	0.46	154
San Mateo	2024	Construction and Mining - Crawler Tractors	Aggregate	Aggregate	Diesel	5.83E-04	5.30E-03	4.58E-03	1.23E-05	2.45E-04	2.25E-04	1.30	431
San Mateo	2024	Construction and Mining - Excavators	Aggregate	Aggregate	Diesel	1.72E-03	1.36E-02	1.56E-02	3.95E-05	5.32E-04	4.90E-04	4.17	1,380
San Mateo	2024	Construction and Mining - Graders	Aggregate	Aggregate	Diesel	2.62E-04	2.42E-03	1.75E-03	5.76E-06	1.11E-04	1.02E-04	0.61	201
San Mateo	2024	Construction and Mining - Misc - Asphalt Pavers	Aggregate	Aggregate	Gasoline	7.08E-04	5.63E-04	2.72E-02	1.01E-06	2.41E-04	1.82E-04	0.06	21
San Mateo	2024	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	Aggregate	Gasoline	1.91E-04	2.28E-04	7.41E-03	6.31E-07	6.78E-05	5.12E-05	0.05	18
San Mateo	2024	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	Aggregate	Diesel	5.07E-05	3.20E-04	1.86E-04	4.59E-09	1.08E-05	8.19E-06	0.00	0
San Mateo	2024	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	Aggregate	Gasoline	9.13E-03	5.59E-03	2.74E-01	4.46E-06	2.37E-03	1.79E-03	0.00	0
San Mateo	2024	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	Aggregate	Diesel	6.23E-05	3.91E-04	3.03E-04	6.74E-09	1.37E-05	1.04E-05	0.00	0
San Mateo	2024	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Gasoline	7.36E-03	5.15E-03	2.44E-01	5.36E-06	2.69E-03	2.03E-03	0.15	48
San Mateo	2024	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Diesel	3.07E-05	2.31E-04	2.35E-04	3.49E-07	7.35E-06	6.45E-06	0.03	9
San Mateo	2024	Construction and Mining - Misc - Cranes	Aggregate	Aggregate	Gasoline	5.98E-05	1.45E-04	3.48E-03	4.95E-07	3.39E-06	2.56E-06	0.05	16
San Mateo	2024	Construction and Mining - Misc - Crushing/Proc. Equipment	Aggregate	Aggregate	Gasoline	4.92E-05	3.31E-05	1.73E-03	2.74E-08	1.98E-05	1.50E-05	0.00	0
San Mateo	2024	Construction and Mining - Misc - Dumpers/Tenders	Aggregate	Aggregate	Gasoline	9.62E-04	6.30E-04	2.60E-02	4.53E-07	2.63E-04	1.99E-04	0.00	1
San Mateo	2024	Construction and Mining - Misc - Dumpers/Tenders	Aggregate	Aggregate	Diesel	6.27E-06	3.94E-05	2.14E-05	5.43E-10	1.33E-06	1.01E-06	0.00	0
San Mateo	2024	Construction and Mining - Misc - Excavators	Aggregate	Aggregate	Diesel	4.48E-05	2.83E-04	1.53E-04	3.88E-09	9.52E-06	7.19E-06	0.00	0
San Mateo	2024	Construction and Mining - Misc - Other	Aggregate	Aggregate	Gasoline	2.95E-05	1.04E-04	2.78E-03	7.77E-07	5.61E-06	4.24E-06	0.08	26
San Mateo	2024	Construction and Mining - Misc - Other	Aggregate	Aggregate	Diesel	1.32E-04	8.30E-04	6.51E-04	1.44E-08	2.90E-05	2.19E-05	0.00	1
San Mateo	2024	Construction and Mining - Misc - Pavers	Aggregate	Aggregate	Diesel	1.18E-05	7.46E-05	4.03E-05	1.02E-09	2.51E-06	1.90E-06	0.00	0
San Mateo	2024	Construction and Mining - Misc - Paving Equipment	Aggregate	Aggregate	Gasoline	1.58E-02	1.05E-02	4.72E-01	8.19E-06	4.66E-03	3.52E-03	0.06	18
San Mateo	2024	Construction and Mining - Misc - Paving Equipment	Aggregate	Aggregate	Diesel	2.00E-05	1.27E-04	6.84E-05	1.74E-09	4.26E-06	3.22E-06	0.00	0
San Mateo	2024	Construction and Mining - Misc - Plate Compactors	Aggregate	Aggregate	Gasoline	6.56E-03	4.08E-03	1.86E-01	3.02E-06	1.58E-03	1.19E-03	0.00	0
San Mateo	2024	Construction and Mining - Misc - Plate Compactors	Aggregate	Aggregate	Diesel	4.26E-05	2.67E-04	2.23E-04	4.85E-09	9.38E-06	7.09E-06	0.00	0
San Mateo	2024	Construction and Mining - Misc - Rollers	Aggregate	Aggregate	Gasoline	3.34E-03	2.61E-03	1.18E-01	3.39E-06	1.12E-03	8.48E-04	0.18	58
San Mateo	2024	Construction and Mining - Misc - Rollers	Aggregate	Aggregate	Diesel	2.95E-04	1.85E-03	1.29E-03	2.98E-08	6.38E-05	4.82E-05	0.00	1
San Mateo	2024	Construction and Mining - Misc - Rough Terrain Forklifts	Aggregate	Aggregate	Gasoline	3.74E-04	1.03E-03	1.87E-02	3.44E-06	2.46E-05	1.86E-05	0.35	117
San Mateo	2024	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	Aggregate	Gasoline	2.13E-04	5.31E-04	1.22E-02	1.81E-06	1.28E-05	9.66E-06	0.18	61
San Mateo	2024	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	8.03E-06	5.07E-05	2.74E-05	6.96E-10	1.71E-06	1.29E-06	0.00	0
San Mateo	2024	Construction and Mining - Misc - Signal Boards	Aggregate	Aggregate	Gasoline	1.58E-04	1.11E-04	5.33E-03	8.49E-08	6.08E-05	4.59E-05	0.00	0
San Mateo	2024	Construction and Mining - Misc - Signal Boards	Aggregate	Aggregate	Diesel	6.75E-04	4.25E-03	3.58E-03	2.30E-07	1.49E-04	1.13E-04	0.02	7
San Mateo	2024	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	Aggregate	Gasoline	5.01E-03	3.70E-03	1.68E-01	7.60E-06	1.59E-03	1.20E-03	0.50	167
San Mateo	2024	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	Aggregate	Diesel	2.32E-03	1.46E-02	7.89E-03	2.01E-07	5.00E-04	3.78E-04	0.02	7
San Mateo	2024	Construction and Mining - Misc - Surfacing Equipment	Aggregate	Aggregate	Gasoline	8.52E-03	5.91E-03	2.24E-01	3.65E-06	2.46E-03	1.86E-03	0.00	0
San Mateo	2024	Construction and Mining - Misc - Tampers/Rammers	Aggregate	Aggregate	Gasoline	7.59E-04	5.84E-04	2.91E-02	4.70E-07	4.12E-04	3.11E-04	0.00	0
San Mateo	2024	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Gasoline	9.54E-05	2.62E-04	7.40E-03	1.15E-06	8.26E-06	6.24E-06	0.12	39
San Mateo	2024	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	2.14E-04	1.35E-03	7.31E-04	1.86E-08	4.55E-05	3.44E-05	0.00	1
San Mateo	2024	Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	Gasoline	5.91E-03	4.56E-03	2.13E-01	6.39E-06	2.03E-03	1.54E-03	0.32	107
San Mateo	2024	Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	Diesel	2.69E-04	1.70E-03	1.03E-03	2.50E-08	5.77E-05	4.36E-05	0.00	1
San Mateo	2024	Construction and Mining - Off-Highway Tractors	Aggregate	Aggregate	Diesel	3.94E-04	2.57E-03	3.17E-03	7.02E-06	1.25E-04	1.15E-04	0.74	245
San Mateo	2024	Construction and Mining - Off-Highway Trucks	Aggregate	Aggregate	Diesel	6.71E-04	5.77E-03	3.99E-03	1.63E-05	2.09E-04	1.92E-04	1.73	571
San Mateo	2024	Construction and Mining - Pavers	Aggregate	Aggregate	Diesel	1.24E-04	1.02E-03	1.07E-03	2.54E-06	4.47E-05	4.11E-05	0.27	89
San Mateo	2024	Construction and Mining - Paving Equipment	Aggregate	Aggregate	Diesel	1.12E-04	8.28E-04	1.09E-03	2.82E-06	3.63E-05	3.34E-05	0.30	99
San Mateo	2024	Construction and Mining - Rollers	Aggregate	Aggregate	Diesel	4.02E-04	3.06E-03	4.01E-03	6.71E-06	1.42E-04	1.31E-04	0.71	234
San Mateo	2024	Construction and Mining - Rough Terrain Forklifts	Aggregate	Aggregate	Diesel	3.21E-04	3.02E-03	4.96E-03	8.33E-06	1.11E-04	1.02E-04	0.88	291
San Mateo	2024	Construction and Mining - Rubber Tired Dozers	Aggregate	Aggregate	Diesel	7.67E-05	6.85E-04	6.08E-04	1.42E-06	3.32E-05	3.06E-05	0.15	50
San Mateo	2024	Construction and Mining - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	1.29E-03	9.83E-03	9.80E-03	2.87E-05	4.32E-04	3.97E-04	3.03	1,004
San Mateo	2024	Construction and Mining - Scrapers	Aggregate	Aggregate	Diesel	6.34E-04	6.29E-03	5.34E-03	1.45E-05	2.78E-04	2.56E-04	1.33	508
San Mateo	2024	Construction and Mining - Skid Steer Loaders	Aggregate	Aggregate	Diesel	7.36E-04	7.15E-03	8.44E-03	1.37E-05	2.54E-04	2.34E-04	1.44	478
San Mateo	2024	Construction and Mining - Surfacing Equipment	Aggregate	Aggregate	Diesel	5.31E-05	4.22E-04	3.65E-04	1.33E-06	1.79E-05	1.65E-05	0.14	47
San Mateo	2024	Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	2.10E-03	1.71E-02	2.07E-02	3.86E-05	8.61E-04	7.92E-04	4.07	1,348
San Mateo	2024	Construction and Mining - Trenchers	Aggregate	Aggregate	Diesel	9.59E-05	7.81E-04	6.63E-04	1.34E-06	3.68E-05	3.39E-05	0.14	47
TOTAL CONSTRUCTION OFFROAD (tons/day)						7.94E-02	1.56E-01	2.15E+00	2.63E-04	2.42E-02	1.89E-02	24.37	8,068
ESTIMATED San Mateo (tons/yr)						1.31	2.58	35.42	0.00	0.40	0.31	402.04	133123.98
ESTIMATED San Mateo (lbs/day)						7	14	194	0	2	2	804077	

City and County Population: Department of Finance E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024; and US Census Bureau, <a href="https://anhemap.ces.census.gov/">https://anhemap.ces.census.gov/</a>	
	2024
City Service Population	51,610
County Service Population	1,141,695
% of County Service Population Attributable to City	5%



Industrial and Light Commercial													
Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2.5_tpd	CO2_tpd	CO2e_MtYr
San Mateo	2024 Industrial - Aerial Lifts		Aggregate	Aggregate	Diesel	5.02E-04	6.28E-03	7.37E-03	1.23E-05	1.69E-04	1.55E-04	1.30	432
San Mateo	2024 Industrial - Forklifts		Aggregate	Aggregate	Diesel	2.62E-03	2.38E-02	3.25E-02	5.50E-05	9.56E-04	8.79E-04	5.81	1,922
San Mateo	2024 Industrial - Misc - Aerial Lifts		Aggregate	Aggregate	Gasoline	3.33E-03	2.99E-03	1.20E-01	9.69E-06	8.76E-04	6.62E-04	0.81	269
San Mateo	2024 Industrial - Misc - Aerial Lifts		Aggregate	Aggregate	Diesel	1.74E-04	1.10E-03	7.05E-04	1.67E-08	3.86E-05	2.92E-05	0.00	1
San Mateo	2024 Industrial - Misc - Aerial Lifts		Aggregate	Aggregate	Nat Gas	4.15E-05	3.23E-04	1.18E-02	2.51E-08	3.16E-05	2.39E-05	0.00	0
San Mateo	2024 Industrial - Misc - Forklifts		Aggregate	Aggregate	Gasoline	2.70E-02	1.22E-01	3.01E+00	2.68E-04	1.87E-03	1.41E-03	26.76	8,862
San Mateo	2024 Industrial - Misc - Forklifts		Aggregate	Aggregate	Nat Gas	7.68E-06	1.87E-01	1.73E+00	2.76E-09	3.81E-03	2.85E-06	42.77	14,161
San Mateo	2024 Industrial - Misc - Other General Industrial Equipment		Aggregate	Aggregate	Gasoline	1.41E-03	1.80E-03	1.13E-01	5.22E-06	2.93E-05	2.21E-05	0.37	122
San Mateo	2024 Industrial - Misc - Other General Industrial Equipment		Aggregate	Aggregate	Diesel	1.33E-04	8.66E-04	5.39E-04	1.28E-08	2.95E-05	2.23E-05	0.00	0
San Mateo	2024 Industrial - Misc - Other Material Handling Equipment		Aggregate	Aggregate	Gasoline	1.72E-04	8.66E-04	1.06E-02	2.12E-06	1.52E-05	1.15E-05	0.22	72
San Mateo	2024 Industrial - Misc - Sweepers/Scrubbers		Aggregate	Aggregate	Gasoline	1.88E-03	5.03E-03	1.62E-01	1.73E-05	1.09E-04	8.20E-05	1.54	510
San Mateo	2024 Industrial - Misc - Sweepers/Scrubbers		Aggregate	Aggregate	Diesel	3.39E-05	2.24E-04	1.50E-04	3.45E-09	7.68E-06	5.81E-06	0.00	0
San Mateo	2024 Industrial - Other General Industrial Equipment		Aggregate	Aggregate	Diesel	9.33E-04	7.62E-03	6.82E-03	1.62E-05	3.39E-04	3.12E-04	1.71	566
San Mateo	2024 Light Commercial - Misc - Air Compressors		Aggregate	Aggregate	Gasoline	7.69E-02	4.82E-02	4.74E+00	1.78E-04	3.05E-04	3.00E-04	11.12	3,682
San Mateo	2024 Light Commercial - Misc - Air Compressors		Aggregate	Aggregate	Diesel	8.34E-04	5.74E-03	7.00E-03	1.08E-05	1.88E-04	1.77E-04	0.87	288
San Mateo	2024 Light Commercial - Misc - Air Compressors		Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0
San Mateo	2024 Light Commercial - Misc - Gas Compressors		Aggregate	Aggregate	Nat Gas	0.00E+00	2.09E-02	2.45E-01	0.00E+00	0.00E+00	0.00E+00	6.69	2,214
San Mateo	2024 Light Commercial - Misc - Generator Sets		Aggregate	Aggregate	Gasoline	2.44E-01	9.32E-02	7.18E+00	3.04E-04	6.58E-04	7.00E-04	19.18	6,351
San Mateo	2024 Light Commercial - Misc - Generator Sets		Aggregate	Aggregate	Diesel	2.91E-03	2.36E-02	2.10E-02	4.08E-05	6.67E-04	7.26E-04	3.55	1,175
San Mateo	2024 Light Commercial - Misc - Generator Sets		Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0
San Mateo	2024 Light Commercial - Misc - Generator Sets		Aggregate	Aggregate	Nat Gas	0.00E+00	6.52E-04	6.11E-03	0.00E+00	0.00E+00	0.00E+00	0.22	72
San Mateo	2024 Light Commercial - Misc - Pressure Washers		Aggregate	Aggregate	Gasoline	5.87E-02	2.52E-02	3.46E+00	1.19E-04	8.93E-05	1.17E-04	6.83	2,263
San Mateo	2024 Light Commercial - Misc - Pressure Washers		Aggregate	Aggregate	Diesel	1.28E-05	1.18E-04	1.00E-04	2.06E-07	3.09E-06	3.47E-06	0.02	6
San Mateo	2024 Light Commercial - Misc - Pressure Washers		Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0
San Mateo	2024 Light Commercial - Misc - Pumps		Aggregate	Aggregate	Gasoline	1.56E-02	8.72E-03	7.49E-01	4.48E-05	1.64E-04	1.35E-04	3.48	1,151
San Mateo	2024 Light Commercial - Misc - Pumps		Aggregate	Aggregate	Diesel	1.73E-03	1.32E-02	1.24E-02	2.30E-05	3.86E-04	4.14E-04	1.99	658
San Mateo	2024 Light Commercial - Misc - Pumps		Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0
San Mateo	2024 Light Commercial - Misc - Welders		Aggregate	Aggregate	Gasoline	3.57E-02	1.97E-02	2.05E+00	8.43E-05	2.38E-04	2.23E-04	5.49	1,818
San Mateo	2024 Light Commercial - Misc - Welders		Aggregate	Aggregate	Diesel	3.97E-03	2.86E-02	3.19E-02	5.29E-05	9.10E-04	8.88E-04	4.33	1,441
San Mateo	2024 Light Commercial - Misc - Welders		Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0
TOTAL LIGHT COMMERCIAL + INDUSTRIAL OFFROAD (tons/day)						0.478	0.648	23.716	0.001	0.012	0.007	145.07	48,036
ESTIMATED San Mateo (tons/yr)						8.52	11.54	422.65	0.02	0.21	0.13	7.08	2,345
ESTIMATED San Mateo (lbs/day)						47	63	2316	0	1	1	14166	

EMPLOYMENT: Employment Development Department, San Mateo County Profile, <a href="https://labormarketinfo.edd.ca.gov/geography/sanmateo-county.html">https://labormarketinfo.edd.ca.gov/geography/sanmateo-county.html</a>		2024
Employment in San Mateo County		425,600
Employment in San Carlos		20,780
Percent in the City		5%

Note: San Mateo County employment estimates reflect those reported in January 2024.

Lawn and Garden															
Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2_5_tpd	CO2_tpd	CO2e_MTY		
San Mateo	2024	Lawn and Garden - Misc - Chainsaws	Aggregate	Aggregate	Gasoline	1.80E-01	6.01E-03	5.36E-01	4.13E-05	2.26E-03	1.70E-03	2.86	946		
San Mateo	2024	Lawn and Garden - Misc - Chainsaws	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0		
San Mateo	2024	Lawn and Garden - Misc - Chainsaws Preempt	Aggregate	Aggregate	Gasoline	1.64E-01	5.84E-03	2.88E-01	2.44E-05	1.22E-03	9.19E-04	2	509		
San Mateo	2024	Lawn and Garden - Misc - Chainsaws Preempt	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0		
San Mateo	2024	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Gasoline	2.78E-04	9.47E-05	1.30E-02	4.72E-07	5.03E-07	3.80E-07	0	9		
San Mateo	2024	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Diesel	3.62E-06	2.29E-05	1.24E-05	2.87E-08	7.70E-07	5.82E-07	0	1		
San Mateo	2024	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0		
San Mateo	2024	Lawn and Garden - Misc - Lawn Mowers	Aggregate	Aggregate	Gasoline	5.20E-02	3.07E-02	2.52E+00	1.06E-04	5.28E-04	3.99E-04	6	2,140		
San Mateo	2024	Lawn and Garden - Misc - Lawn Mowers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0		
San Mateo	2024	Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	Aggregate	Gasoline	3.02E-01	1.07E-02	1.53E+00	1.06E-04	4.40E-03	3.33E-03	8	2,534		
San Mateo	2024	Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0		
San Mateo	2024	Lawn and Garden - Misc - Other	Aggregate	Aggregate	Gasoline	1.05E-03	4.19E-04	6.10E-02	2.28E-06	2.86E-06	2.16E-06	0	46		
San Mateo	2024	Lawn and Garden - Misc - Other	Aggregate	Aggregate	Diesel	1.60E-06	1.11E-05	8.83E-06	1.45E-08	3.87E-07	2.92E-07	0	1		
San Mateo	2024	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Gasoline	8.93E-02	4.53E-02	5.10E+00	1.74E-04	3.53E-04	2.67E-04	10	3,298		
San Mateo	2024	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Diesel	1.41E-03	9.14E-03	5.66E-03	1.16E-05	3.11E-04	2.35E-04	1	405		
San Mateo	2024	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0		
San Mateo	2024	Lawn and Garden - Misc - Snowblowers	Aggregate	Aggregate	Gasoline	3.66E-04	1.69E-04	2.48E-02	8.37E-07	9.34E-07	7.04E-07	0	14		
San Mateo	2024	Lawn and Garden - Misc - Snowblowers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0		
San Mateo	2024	Lawn and Garden - Misc - Tillers	Aggregate	Aggregate	Gasoline	2.52E-03	3.97E-04	4.87E-02	2.14E-06	4.88E-06	3.69E-06	0	43		
San Mateo	2024	Lawn and Garden - Misc - Tillers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0		
San Mateo	2024	Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	Aggregate	Gasoline	1.93E-01	1.20E-02	1.18E+00	7.91E-05	1.67E-03	1.26E-03	6	1,912		
San Mateo	2024	Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0		
San Mateo	2024	Lawn and Garden - Misc - Wood Splitters	Aggregate	Aggregate	Gasoline	1.02E-02	4.83E-03	4.89E-01	1.87E-05	4.38E-05	3.31E-05	1	377		
TOTAL LAWN & GARDEN (tons/day)						1.00	0.13	11.80	0.00	0.01	0.01	36.95	12235.27		
ESTIMATED San Mateo (tons/yr)						16.43	2.07	194.73	0.01	0.18	0.13	609.68	201878.48		
ESTIMATED San Mateo (lbs/day)						90	11	1067	0	1	1	3341			

City and County Population: Department of Finance E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024; and US Census Bureau, <a href="https://antheimap.ces.census.gov/">https://antheimap.ces.census.gov/</a>	
City Service Population	2024
County Service Population	51,610
City % Total Service Population in County	1,141,695
	5%

**San Mateo County OFFROAD2021: Year 2045**  
Source: <https://arb.ca.gov/emfac/offroad/emissions-inventory/ac1e3a1dd06a5013c98eb0ec624495ddf9d9eb1a>  
Construction includes: Over 25 horsepower, self-propelled, diesel equipment only subjected to In-Use Regulation; AND Under 25 horsepower equipment not subject to the In-Use Regulation

Model Output: OFFROAD2021 (v1.0.7) Emissions Inventory  
Region Type: County  
Region: San Mateo  
Calendar Year: 2045  
Scenario: All Adopted Rules - Exhaust  
Vehicle Classification: OFFROAD2021 Equipment Types  
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Construction and Mining														
Region	CalYr	VehClass	MDYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2_5_tpd	CO2_tpd	CO2e_MTY	
San Mateo	2024	Construction and Mining - Bore/Drill Rigs	Aggregate	Aggregate	Diesel	1.71E-04	4.19E-04	1.62E-03	4.83E-06	1.73E-05	1.59E-05	0.51	1,352	169
San Mateo	2024	Construction and Mining - Cranes	Aggregate	Aggregate	Diesel	9.90E-05	2.64E-04	1.05E-03	4.26E-06	1.30E-05	1.20E-05	0.45		149
San Mateo	2024	Construction and Mining - Crawler Tractors	Aggregate	Aggregate	Diesel	3.75E-04	8.87E-04	4.06E-03	1.26E-05	4.10E-05	3.78E-05	1.33	440	
San Mateo	2024	Construction and Mining - Excavators	Aggregate	Aggregate	Diesel	1.44E-03	4.67E-03	1.57E-02	3.87E-05	1.33E-04	1.22E-04	4.08	200	1,352
San Mateo	2024	Construction and Mining - Graders	Aggregate	Aggregate	Diesel	1.60E-04	2.98E-04	1.72E-03	5.72E-06	1.72E-05	1.58E-05	0.60		200
San Mateo	2024	Construction and Mining - Misc - Asphalt Pavers	Aggregate	Aggregate	Gasoline	8.43E-04	6.27E-04	3.22E-02	1.09E-06	2.98E-04	2.25E-04	0.06	21	
San Mateo	2024	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	Aggregate	Gasoline	2.09E-04	1.84E-04	8.36E-03	6.47E-07	7.98E-05	6.03E-05	0.05	18	
San Mateo	2024	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	Aggregate	Diesel	6.17E-05	3.89E-04	2.26E-04	5.58E-09	1.32E-05	9.95E-06	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	Aggregate	Gasoline	1.15E-02	7.27E-03	3.50E-01	5.67E-06	3.05E-03	2.31E-03	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	Aggregate	Diesel	7.55E-05	4.74E-04	3.68E-04	8.18E-09	1.65E-05	1.25E-05	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Gasoline	9.42E-03	6.55E-03	3.11E-01	6.42E-06	3.44E-03	2.60E-03	0.15	48	
San Mateo	2024	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Diesel	2.75E-05	2.37E-04	2.74E-04	4.24E-07	2.92E-06	2.35E-06	0.03	11	
San Mateo	2024	Construction and Mining - Misc - Cranes	Aggregate	Aggregate	Gasoline	4.21E-05	9.49E-05	3.57E-03	4.95E-07	3.39E-06	2.56E-06	0.05	16	
San Mateo	2024	Construction and Mining - Misc - Crushing/Proc. Equipment	Aggregate	Aggregate	Gasoline	6.10E-05	4.10E-05	2.13E-03	3.38E-08	2.45E-05	1.85E-05	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Dumpers/Tenders	Aggregate	Aggregate	Gasoline	1.24E-03	8.16E-04	3.32E-02	5.72E-07	3.37E-04	2.55E-04	0.00	1	
San Mateo	2024	Construction and Mining - Misc - Dumpers/Tenders	Aggregate	Aggregate	Diesel	7.64E-06	4.83E-05	2.61E-05	6.62E-10	1.62E-06	1.23E-06	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Excavators	Aggregate	Aggregate	Diesel	5.44E-05	3.44E-04	1.86E-04	4.72E-09	1.16E-05	8.74E-06	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Other	Aggregate	Aggregate	Gasoline	2.95E-05	1.04E-04	2.78E-03	7.77E-07	5.61E-06	4.24E-06	0.08	26	
San Mateo	2024	Construction and Mining - Misc - Other	Aggregate	Aggregate	Diesel	1.63E-04	1.02E-03	8.01E-04	1.78E-08	3.57E-05	2.69E-05	0.00	1	
San Mateo	2024	Construction and Mining - Misc - Pavers	Aggregate	Aggregate	Diesel	1.45E-05	9.16E-05	4.94E-05	1.26E-09	3.08E-06	2.33E-06	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Paving Equipment	Aggregate	Aggregate	Gasoline	2.03E-02	1.35E-02	6.05E-01	1.03E-05	5.98E-03	4.52E-03	0.06	18	
San Mateo	2024	Construction and Mining - Misc - Paving Equipment	Aggregate	Aggregate	Diesel	2.38E-05	1.50E-04	8.11E-05	2.04E-09	5.05E-06	3.81E-06	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Plate Compactors	Aggregate	Aggregate	Gasoline	8.44E-03	5.25E-03	2.39E-01	3.88E-06	2.03E-03	1.53E-03	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Plate Compactors	Aggregate	Aggregate	Diesel	5.17E-05	3.24E-04	2.71E-04	5.89E-09	1.14E-05	8.60E-06	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Rollers	Aggregate	Aggregate	Gasoline	4.14E-03	3.02E-03	1.47E-01	3.85E-06	1.44E-03	1.09E-03	0.18	58	
San Mateo	2024	Construction and Mining - Misc - Rollers	Aggregate	Aggregate	Diesel	3.51E-04	2.21E-03	1.53E-03	3.54E-08	7.59E-05	5.74E-05	0.00	1	
San Mateo	2024	Construction and Mining - Misc - Rough Terrain Forklifts	Aggregate	Aggregate	Gasoline	2.50E-04	6.56E-04	1.87E-02	3.44E-06	2.46E-05	1.86E-05	0.35	117	
San Mateo	2024	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	Aggregate	Gasoline	1.51E-04	3.78E-04	1.23E-02	1.81E-06	1.28E-05	9.66E-06	0.18	61	
San Mateo	2024	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	9.69E-06	6.13E-05	3.31E-05	8.40E-10	2.06E-06	1.56E-06	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Signal Boards	Aggregate	Aggregate	Gasoline	2.03E-04	1.44E-04	6.85E-03	1.09E-07	7.81E-05	5.90E-05	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Signal Boards	Aggregate	Aggregate	Diesel	8.15E-04	5.14E-03	4.34E-03	2.79E-07	1.78E-04	1.35E-04	0.02	8	
San Mateo	2024	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	Aggregate	Gasoline	6.09E-03	4.39E-03	2.01E-01	8.14E-06	1.97E-03	1.49E-03	0.50	167	
San Mateo	2024	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	Aggregate	Diesel	2.69E-03	1.70E-02	9.17E-03	2.33E-07	5.71E-04	4.31E-04	0.02	8	
San Mateo	2024	Construction and Mining - Misc - Surfacing Equipment	Aggregate	Aggregate	Gasoline	1.10E-02	7.62E-03	2.88E-01	4.69E-06	3.16E-03	2.39E-03	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Tampers/Rammers	Aggregate	Aggregate	Gasoline	9.76E-04	7.50E-04	3.75E-02	6.04E-07	5.29E-04	4.00E-04	0.00	0	
San Mateo	2024	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Gasoline	9.50E-05	2.60E-04	7.37E-03	1.15E-06	8.26E-06	6.24E-06	0.12	39	
San Mateo	2024	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	2.61E-04	1.65E-03	8.92E-04	2.27E-08	5.55E-05	4.20E-05	0.00	1	
San Mateo	2024	Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	Gasoline	7.37E-03	5.33E-03	2.67E-01	7.21E-06	2.63E-03	1.98E-03	0.32	107	
San Mateo	2024	Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	Diesel	2.83E-04	1.79E-03	1.08E-03	2.63E-08	6.06E-05	4.58E-05	0.00	1	
San Mateo	2024	Construction and Mining - Off-Highway Tractors	Aggregate	Aggregate	Diesel	2.99E-04	8.32E-04	3.14E-03	7.04E-06	2.65E-05	2.44E-05	0.74	246	
San Mateo	2024	Construction and Mining - Off-Highway Trucks	Aggregate	Aggregate	Diesel	5.79E-04	2.22E-03	3.92E-03	1.68E-05	6.09E-05	5.60E-05	1.77	587	
San Mateo	2024	Construction and Mining - Pavers	Aggregate	Aggregate	Diesel	8.88E-05	3.13E-04	1.09E-03	2.49E-06	1.01E-05	9.26E-06	0.36	87	
San Mateo	2024	Construction and Mining - Paving Equipment	Aggregate	Aggregate	Diesel	9.22E-05	2.57E-04	1.11E-03	2.77E-06	9.51E-06	8.75E-06	0.29	97	
San Mateo	2024	Construction and Mining - Rollers	Aggregate	Aggregate	Diesel	2.60E-04	1.14E-03	4.03E-03	6.74E-06	2.72E-05	2.50E-05	0.71	235	
San Mateo	2024	Construction and Mining - Rough Terrain Forklifts	Aggregate	Aggregate	Diesel	2.53E-04	1.05E-03	5.08E-03	8.21E-06	2.81E-05	2.59E-05	0.87	287	
San Mateo	2024	Construction and Mining - Rubber Tired Dozers	Aggregate	Aggregate	Diesel	5.68E-05	1.04E-04	4.67E-04	1.72E-06	5.03E-06	4.63E-06	0.18	60	
San Mateo	2024	Construction and Mining - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	9.98E-04	1.73E-03	9.67E-03	2.87E-05	8.91E-05	8.20E-05	3.03	1,004	
San Mateo	2024	Construction and Mining - Scrapers	Aggregate	Aggregate	Diesel	4.34E-04	6.88E-04	3.70E-03	1.74E-05	4.52E-05	4.16E-05	1.84	608	
San Mateo	2024	Construction and Mining - Skid Steer Loaders	Aggregate	Aggregate	Diesel	6.04E-04	4.81E-03	8.51E-03	1.35E-05	6.44E-05	5.93E-05	1.43	472	
San Mateo	2024	Construction and Mining - Surfacing Equipment	Aggregate	Aggregate	Diesel	4.39E-05	1.29E-04	3.56E-04	1.34E-06	4.74E-06	4.34E-06	0.14	47	
San Mateo	2024	Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	1.39E-03	4.98E-03	2.08E-02	3.83E-05	1.62E-04	1.49E-04	4.04	1,339	
San Mateo	2024	Construction and Mining - Trenchers	Aggregate	Aggregate	Diesel	5.59E-05	3.82E-04	6.32E-04	1.34E-06	7.29E-06	6.70E-06	0.14	47	
TOTAL CONSTRUCTION OFFROAD (tons/day)						9.46E-02	1.13E-01	2.68E+00	2.74E-04	2.69E-02	2.05E-02	24.63	8,156	
ESTIMATED San Mateo (tons/yr)						1.56	1.86	44.21	0.00	0.44	0.34	406.40	134568.99	
ESTIMATED San Mateo (lbs/day)						9	10	242	0	2	2	812805		

City and County Population: Department of Finance E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024; and US Census Bureau, <a href="https://anhemap.ces.census.gov/">https://anhemap.ces.census.gov/</a>	
	2024
City Service Population	51,610
County Service Population	1,141,695
% of County Service Population Attributable to City	5%

Industrial and Light Commercial													
Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2.5_tpd	CO2_tpd	CO2e_MtYr
San Mateo	2024 Industrial - Aerial Lifts		Aggregate	Aggregate	Diesel	4.70E-04	4.97E-03	7.53E-03	1.22E-05	4.78E-05	4.40E-05	1.39	426
San Mateo	2024 Industrial - Forklifts		Aggregate	Aggregate	Diesel	1.97E-03	1.01E-02	3.30E-02	5.39E-05	2.04E-04	1.87E-04	5.69	1,885
San Mateo	2024 Industrial - Misc - Aerial Lifts		Aggregate	Aggregate	Gasoline	4.34E-03	3.83E-03	1.54E-01	1.21E-05	1.15E-03	8.65E-04	1.01	333
San Mateo	2024 Industrial - Misc - Aerial Lifts		Aggregate	Aggregate	Diesel	2.22E-04	1.40E-03	9.00E-04	2.14E-08	4.77E-05	3.61E-05	0.00	1
San Mateo	2024 Industrial - Misc - Aerial Lifts		Aggregate	Aggregate	Nat Gas	5.42E-05	4.17E-04	1.52E-02	3.24E-08	4.09E-05	3.09E-05	0.00	0
San Mateo	2024 Industrial - Misc - Forklifts		Aggregate	Aggregate	Gasoline	3.35E-02	1.51E-01	3.73E+00	3.32E-04	2.31E-03	1.75E-03	33.16	10,980
San Mateo	2024 Industrial - Misc - Forklifts		Aggregate	Aggregate	Nat Gas	9.40E-06	2.32E-01	2.15E+00	3.36E-09	4.72E-03	3.48E-06	52.99	17,346
San Mateo	2024 Industrial - Misc - Other General Industrial Equipment		Aggregate	Aggregate	Gasoline	1.79E-03	2.25E-03	1.43E-01	6.52E-06	3.65E-05	2.75E-05	0.46	151
San Mateo	2024 Industrial - Misc - Other General Industrial Equipment		Aggregate	Aggregate	Diesel	1.78E-04	1.16E-03	7.19E-04	1.71E-08	3.93E-05	2.97E-05	0.00	1
San Mateo	2024 Industrial - Misc - Other Material Handling Equipment		Aggregate	Aggregate	Gasoline	1.52E-04	9.28E-04	1.28E-02	2.63E-06	1.89E-05	1.43E-05	0.27	90
San Mateo	2024 Industrial - Misc - Sweepers/Scrubbers		Aggregate	Aggregate	Gasoline	2.36E-03	6.25E-03	2.03E-01	2.15E-05	1.35E-04	1.02E-04	1.91	632
San Mateo	2024 Industrial - Misc - Sweepers/Scrubbers		Aggregate	Aggregate	Diesel	4.44E-05	2.93E-04	1.96E-04	4.52E-09	1.01E-05	7.60E-06	0.00	0
San Mateo	2024 Industrial - Other General Industrial Equipment		Aggregate	Aggregate	Diesel	6.58E-04	3.11E-03	6.64E-03	1.65E-05	7.18E-05	6.61E-05	1.74	577
San Mateo	2024 Light Commercial - Misc - Air Compressors		Aggregate	Aggregate	Gasoline	9.08E-02	5.51E-02	5.71E+00	2.14E-04	3.54E-04	3.40E-04	13.43	4,447
San Mateo	2024 Light Commercial - Misc - Air Compressors		Aggregate	Aggregate	Diesel	7.11E-04	5.86E-03	8.25E-03	1.32E-05	3.90E-05	4.00E-05	1.04	352
San Mateo	2024 Light Commercial - Misc - Air Compressors		Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0
San Mateo	2024 Light Commercial - Misc - Gas Compressors		Aggregate	Aggregate	Nat Gas	0.00E+00	2.59E-02	3.04E-01	0.00E+00	0.00E+00	0.00E+00	8.28	2,743
San Mateo	2024 Light Commercial - Misc - Generator Sets		Aggregate	Aggregate	Gasoline	3.27E-01	1.22E-01	9.65E+00	4.04E-04	7.58E-04	7.91E-04	25.35	8,394
San Mateo	2024 Light Commercial - Misc - Generator Sets		Aggregate	Aggregate	Diesel	2.64E-03	2.45E-02	2.41E-02	4.85E-05	3.30E-04	4.12E-04	4.19	1,387
San Mateo	2024 Light Commercial - Misc - Generator Sets		Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0
San Mateo	2024 Light Commercial - Misc - Generator Sets		Aggregate	Aggregate	Nat Gas	0.00E+00	6.77E-04	7.57E-03	0.00E+00	0.00E+00	0.00E+00	0.27	89
San Mateo	2024 Light Commercial - Misc - Pressure Washers		Aggregate	Aggregate	Gasoline	6.85E-02	2.94E-02	4.03E+00	1.38E-04	9.99E-05	1.31E-04	7.97	2,639
San Mateo	2024 Light Commercial - Misc - Pressure Washers		Aggregate	Aggregate	Diesel	1.19E-05	1.23E-04	1.15E-04	2.44E-07	1.76E-06	2.22E-06	0.02	7
San Mateo	2024 Light Commercial - Misc - Pressure Washers		Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0
San Mateo	2024 Light Commercial - Misc - Pumps		Aggregate	Aggregate	Gasoline	1.88E-02	1.00E-02	9.34E-01	5.57E-05	1.98E-04	1.62E-04	4.31	1,428
San Mateo	2024 Light Commercial - Misc - Pumps		Aggregate	Aggregate	Diesel	1.54E-03	1.36E-02	1.42E-02	2.75E-05	1.76E-04	2.17E-04	2.35	779
San Mateo	2024 Light Commercial - Misc - Pumps		Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0
San Mateo	2024 Light Commercial - Misc - Welders		Aggregate	Aggregate	Gasoline	4.08E-02	2.08E-02	2.48E+00	1.02E-04	2.47E-04	2.14E-04	6.66	2,206
San Mateo	2024 Light Commercial - Misc - Welders		Aggregate	Aggregate	Diesel	3.35E-03	2.93E-02	3.73E-02	6.45E-05	2.44E-04	2.74E-04	5.27	1,746
San Mateo	2024 Light Commercial - Misc - Welders		Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0
TOTAL LIGHT COMMERCIAL + INDUSTRIAL OFFROAD (tons/day)						0.600	0.754	29.663	0.002	0.011	0.006	177.69	58,838
ESTIMATED San Mateo (tons/yr)						10.69	13.44	528.63	0.03	0.20	0.10	8.68	2,873
ESTIMATED San Mateo (lbs/day)						59	74	2897	0	1	1	17352	

EMPLOYMENT: Employment Development Department, San Mateo County Profile, <a href="https://labormarketinfo.edd.ca.gov/geography/sanmateo-county.html">https://labormarketinfo.edd.ca.gov/geography/sanmateo-county.html</a>		2024
Employment in San Mateo County		425,600
Employment in San Carlos		20,780
Percent in the City		5%

Note: San Mateo County employment estimates reflect those reported in January 2024.

Lawn and Garden														
Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2_5_tpd	CO2_tpd	CO2e_MTY	
San Mateo	2024	Lawn and Garden - Misc - Chainsaws	Aggregate	Aggregate	Gasoline	1.92E-01	6.44E-03	5.68E-01	4.39E-05	2.42E-03	1.83E-03	3.04	1,007	
San Mateo	2024	Lawn and Garden - Misc - Chainsaws	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	
San Mateo	2024	Lawn and Garden - Misc - Chainsaws Preempt	Aggregate	Aggregate	Gasoline	1.78E-01	6.37E-03	3.06E-01	2.61E-05	1.39E-03	9.84E-04	2	542	
San Mateo	2024	Lawn and Garden - Misc - Chainsaws Preempt	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	
San Mateo	2024	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Gasoline	3.06E-04	1.03E-04	1.42E-02	5.13E-07	4.75E-07	3.60E-07	0	10	
San Mateo	2024	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Diesel	4.52E-06	2.85E-05	1.54E-05	3.58E-08	9.60E-07	7.25E-07	0	1	
San Mateo	2024	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	
San Mateo	2024	Lawn and Garden - Misc - Lawn Mowers	Aggregate	Aggregate	Gasoline	5.27E-02	3.20E-02	2.69E+00	1.12E-04	1.51E-04	1.14E-04	7	2,250	
San Mateo	2024	Lawn and Garden - Misc - Lawn Mowers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	
San Mateo	2024	Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	Aggregate	Gasoline	3.06E-01	1.08E-02	1.55E+00	1.07E-04	4.44E-03	3.37E-03	8	2,566	
San Mateo	2024	Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	
San Mateo	2024	Lawn and Garden - Misc - Other	Aggregate	Aggregate	Gasoline	1.14E-03	4.47E-04	6.71E-02	2.50E-06	2.27E-06	1.71E-06	0	50	
San Mateo	2024	Lawn and Garden - Misc - Other	Aggregate	Aggregate	Diesel	2.01E-06	1.39E-05	1.11E-05	1.82E-08	4.87E-07	3.68E-07	0	1	
San Mateo	2024	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Gasoline	9.86E-02	4.96E-02	6.27E+00	2.12E-04	1.74E-04	1.32E-04	12	4,021	
San Mateo	2024	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Diesel	1.74E-03	1.13E-02	7.01E-03	1.44E-05	3.84E-04	2.90E-04	2	501	
San Mateo	2024	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	
San Mateo	2024	Lawn and Garden - Misc - Snowblowers	Aggregate	Aggregate	Gasoline	4.07E-04	1.84E-04	2.81E-02	9.48E-07	8.07E-07	6.09E-07	0	16	
San Mateo	2024	Lawn and Garden - Misc - Snowblowers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	
San Mateo	2024	Lawn and Garden - Misc - Tillers	Aggregate	Aggregate	Gasoline	2.83E-03	4.32E-04	5.39E-02	2.35E-06	4.86E-06	3.67E-06	0	47	
San Mateo	2024	Lawn and Garden - Misc - Tillers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	
San Mateo	2024	Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	Aggregate	Gasoline	1.95E-01	1.21E-02	1.20E+00	8.00E-05	1.69E-03	1.28E-03	6	1,933	
San Mateo	2024	Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	
San Mateo	2024	Lawn and Garden - Misc - Wood Splitters	Aggregate	Aggregate	Gasoline	1.03E-02	5.04E-03	5.79E-01	2.21E-05	2.13E-05	1.60E-05	1	452	
TOTAL LAWN & GARDEN (tons/day)						1.04	0.13	13.33	0.00	0.01	0.01	40.44	13398.57	
ESTIMATED San Mateo (tons/yr)						17.15	2.23	219.92	0.01	0.18	0.13	667.65	221072.75	
ESTIMATED San Mateo (lbs/day)						94	12	1205	0	1	1	3658		

City and County Population: Department of Finance E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024; and US Census Bureau, <a href="https://anthemap.ces.census.gov/">https://anthemap.ces.census.gov/</a>		2024
City Service Population		51,610
County Service Population		1,141,695
City % Total Service Population in County		5%

## San Carlos — TRANSPORTATION SECTOR (Criteria Air Pollutants)

Source: EMFAC2021 V.1.0.2., Web Database - Emission Rates. San Mateo County. Based on the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) Global Warming Potentials (GWPs); Kittelson and Associates, Inc. 2024.

Criteria Air Pollutants						
	lbs/day					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Existing EIR Study Area	26	168	1,172	6	37	14
Existing in Year 2045 EIR Study Area	19	89	1,112	6	50	17
Proposed 2045 EIR Study Area	23	109	1,366	8	62	21
Change from Existing Conditions (2024-2045)	-3	-59	194	2	24	7
Change from Existing Land Uses (2045 Emission Rates)	-7	-79	-61	0	13	3

	Tons/year					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Existing EIR Study Area	5	29	203	1	6	2
Existing in Year 2045 EIR Study Area	3	15	193	1	9	3
Proposed 2045 EIR Study Area	4	19	237	1	11	4
Change from Existing Conditions (2024-2045)	-1	-10	34	0	4	1
Change from Existing Land Uses (2045 Emission Rates)	-1	-4	-44	0	-2	-1

Notes:

<sup>1</sup> lbs to Tons 2000

<sup>2</sup> MTons = metric tons; CO<sub>2e</sub> = carbon dioxide-equivalent.

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the 2008 Climate Change Scoping Plan Measure Documentation Supplement.



City of San Carlos VMT

Source: Kittelson & Associates, Inc. 2024.

	Daily VMT			Total Daily VMT	Total with RTAC	Service Population	VMT/SP	VMT/SP w RTAC
Scenario	IX	XI	II					
ExistingYear (Year 2024)	799,045	675,760	35,721	1,510,525	773,123	51,610	29.3	15.0
No Project (Year 2045)	1,143,565	926,543	51,205	2,121,313	1,086,259	93,770	22.6	11.6
GP Update (Year 2045)	1,177,392	1,367,865	62,532	2,607,789	1,335,160	93,770	27.8	14.2

Notes: Total may not add to 100% due to rounding.

IX = Internal-External

XI = External- Internal

II = Internal-Internal

Daily VMT and Fleet Mix Percentage						
	Existing Year (Year 2024)		No Project (Year 2045)		GP Update (Year 2045)	
	Daily VMT	Percent	Daily VMT	Percent	Daily VMT	Percent
Passenger Vehicles	747,022	97%	1,050,506	97%	1,278,749	96%
Trucks	26,101	3%	35,753	3%	56,411	4%

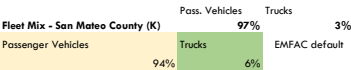
Modeling of vehicle miles traveled (VMT) provided by Kittelson & Associates Inc. 2024. VMT from passenger vehicles and trucks that have an origin or destination in the City using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under Senate Bill 375 (SB 375). For accounting purposes, there are three types of trips.

- Vehicle trips that originated and terminated within the City (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.
- Vehicle trips that either originated or terminated (but not both) within the City (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.
- Vehicle trips that neither originated nor terminated within the City. 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's VMT or emissions.

Year 2024 Existing: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2, PL Emission Rates, San Mateo County

<sup>1</sup> Based on data provided Kittelson & Associates Inc., 2024.

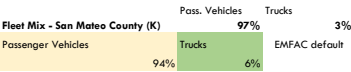


Daily VMT		lbs/day							
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.36%	0.37%	0.13	4.28	0.59	0.07	0.39	0.16
All Other Buses	Natural Gas	0.00%	0.00%	0.00	0.01	0.15	0.00	0.00	0.00
LDA	Gasoline	40.41%	41.49%	5.40	26.23	439.29	1.85	11.00	3.80
LDA	Diesel	0.10%	0.10%	0.04	0.31	0.49	0.00	0.05	0.03
LDA	Electricity	3.74%	3.84%	0.00	0.00	0.00	0.00	0.79	0.22
LDA	Plug-in Hybrid	1.49%	1.53%	0.03	0.08	4.99	0.03	0.32	0.10
LDT1	Gasoline	3.95%	4.06%	1.41	6.81	73.94	0.21	1.19	0.43
LDT1	Diesel	0.00%	0.00%	0.00	0.01	0.01	0.00	0.00	0.00
LDT1	Electricity	0.02%	0.02%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Plug-in Hybrid	0.01%	0.01%	0.00	0.00	0.04	0.00	0.00	0.00
LDT2	Gasoline	26.65%	27.35%	3.71	21.73	295.58	1.47	7.73	2.67
LDT2	Diesel	0.10%	0.11%	0.02	0.07	0.21	0.01	0.04	0.02
LDT2	Electricity	0.20%	0.21%	0.00	0.00	0.00	0.00	0.04	0.01
LDT2	Plug-in Hybrid	0.34%	0.35%	0.01	0.02	1.09	0.01	0.07	0.02
LHD1	Gasoline	2.18%	1.25%	1.00	4.01	34.57	0.31	3.24	1.14
LHD1	Diesel	1.04%	0.60%	2.34	18.19	5.87	0.10	2.05	0.97
LHD1	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.02	0.01
LHD2	Gasoline	0.24%	0.14%	0.09	0.50	3.35	0.04	0.41	0.14
LHD2	Diesel	0.45%	0.26%	0.96	5.87	2.17	0.05	0.97	0.44
LHD2	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
MCY	Gasoline	0.42%	0.43%	6.59	3.68	78.26	0.01	0.13	0.05
MDV	Gasoline	15.31%	15.71%	2.59	15.24	179.01	1.02	4.45	1.54
MDV	Diesel	0.21%	0.21%	0.03	0.13	0.60	0.01	0.07	0.03
MDV	Electricity	0.22%	0.23%	0.00	0.00	0.00	0.00	0.05	0.01
MDV	Plug-in Hybrid	0.19%	0.19%	0.00	0.01	0.61	0.00	0.04	0.01
MH	Gasoline	0.04%	0.04%	0.04	0.23	0.82	0.01	0.04	0.01
MH	Diesel	0.02%	0.02%	0.03	1.06	0.10	0.00	0.04	0.02
Motor Coach	Diesel	0.05%	0.05%	0.01	1.51	0.06	0.01	0.10	0.05
OBUS	Gasoline	0.08%	0.08%	0.05	0.37	1.13	0.02	0.08	0.03
OBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
PTO	Diesel	0.03%	0.02%	0.01	1.49	0.13	0.01	0.00	0.00
PTO	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.02%	0.03	0.27	0.81	0.00	0.02	0.01
SBUS	Diesel	0.02%	0.02%	0.02	1.64	0.07	0.00	0.03	0.01
SBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Natural Gas	0.00%	0.00%	0.00	0.01	0.16	0.00	0.00	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.02%	0.01%	0.00	0.11	0.01	0.00	0.02	0.01
T6 CAIRP Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.07%	0.04%	0.11	2.08	0.35	0.01	0.11	0.07
T6 Instate Delivery Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.05%	0.03%	0.02	0.84	0.11	0.01	0.07	0.03
T6 Instate Delivery Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.11%	0.07%	0.08	2.20	0.31	0.02	0.15	0.07
T6 Instate Delivery Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Instate Delivery Class 7	Diesel	0.04%	0.03%	0.01	0.82	0.07	0.01	0.05	0.02
T6 Instate Delivery Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.07	0.00	0.00	0.00
T6 Instate Other Class 4	Diesel	0.09%	0.05%	0.12	2.73	0.38	0.02	0.15	0.09
T6 Instate Other Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Instate Other Class 5	Diesel	0.24%	0.14%	0.07	2.83	0.31	0.04	0.26	0.11
T6 Instate Other Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Instate Other Class 6	Diesel	0.15%	0.09%	0.09	2.61	0.32	0.03	0.19	0.09
T6 Instate Other Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00

Year 2024 Existing: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2, PL Emission Rates, San Mateo County

<sup>1</sup> Based on data provided Kittelson & Associates Inc., 2024.



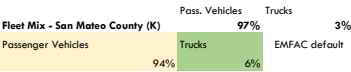
Daily VMT		lbs/day							
		773,123							
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
T6 Instate Other Class 7	Diesel	0.07%	0.04%	0.01	1.07	0.09	0.01	0.07	0.03
T6 Instate Other Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.09	0.00	0.00	0.00
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.05	0.01	0.00	0.00	0.00
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.02%	0.01%	0.00	0.35	0.03	0.00	0.02	0.01
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 OOS Class 7	Diesel	0.01%	0.01%	0.00	0.08	0.01	0.00	0.01	0.00
T6 Public Class 4	Diesel	0.01%	0.00%	0.01	0.55	0.02	0.00	0.01	0.00
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.02%	0.01%	0.02	0.88	0.05	0.00	0.03	0.01
T6 Public Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.10	0.00	0.00	0.00
T6 Public Class 6	Diesel	0.01%	0.01%	0.02	1.01	0.04	0.00	0.02	0.01
T6 Public Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Public Class 7	Diesel	0.03%	0.02%	0.05	3.11	0.11	0.01	0.05	0.03
T6 Public Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.11	0.00	0.00	0.00
T6 Utility Class 5	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.25%	0.15%	0.27	1.71	5.53	0.07	0.25	0.09
T6TS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 CAIRP Class 8	Diesel	0.09%	0.05%	0.02	2.46	0.09	0.02	0.23	0.10
T7 CAIRP Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T7 NNOOS Class 8	Diesel	0.11%	0.06%	0.02	2.83	0.10	0.03	0.27	0.12
T7 NNOOS Class 8	Diesel	0.04%	0.02%	0.01	1.09	0.04	0.01	0.10	0.05
T7 Other Port Class 8	Diesel	0.01%	0.01%	0.00	0.25	0.02	0.00	0.02	0.01
T7 Other Port Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 POAK Class 8	Diesel	0.03%	0.02%	0.01	0.92	0.06	0.01	0.07	0.03
T7 POAK Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Public Class 8	Diesel	0.08%	0.05%	0.14	10.22	0.47	0.02	0.26	0.12
T7 Public Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.07	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class	Diesel	0.02%	0.01%	0.00	0.31	0.02	0.00	0.04	0.02
T7 Single Concrete/Transit Mix Class	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class	Natural Gas	0.00%	0.00%	0.00	0.01	0.10	0.00	0.00	0.00
T7 Single Dump Class 8	Diesel	0.06%	0.03%	0.01	1.48	0.09	0.02	0.13	0.05
T7 Single Dump Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	0.00	0.02	0.40	0.00	0.01	0.00
T7 Single Other Class 8	Diesel	0.06%	0.03%	0.01	1.42	0.09	0.02	0.13	0.05
T7 Single Other Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Single Other Class 8	Natural Gas	0.00%	0.00%	0.00	0.03	0.47	0.00	0.01	0.00
T7 SWCV Class 8	Diesel	0.05%	0.03%	0.04	5.84	0.10	0.03	0.20	0.07
T7 SWCV Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 SWCV Class 8	Natural Gas	0.04%	0.02%	0.07	1.40	14.73	0.00	0.18	0.06
T7 Tractor Class 8	Diesel	0.08%	0.04%	0.02	2.11	0.11	0.02	0.18	0.08
T7 Tractor Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Tractor Class 8	Natural Gas	0.01%	0.01%	0.00	0.08	1.43	0.00	0.02	0.01
T7 Utility Class 8	Diesel	0.00%	0.00%	0.00	0.03	0.00	0.00	0.00	0.00



Year 2024 Existing: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2, PL Emission Rates, San Mateo County

<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2024.



Daily VMT		lbs/day							
		773,123							
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
17 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
17IS	Gasoline	0.00%	0.00%	0.03	0.21	1.78	0.00	0.01	0.00
17IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.02%	0.00	0.01	0.21	0.00	0.04	0.01
UBUS	Diesel	0.12%	0.12%	0.13	0.75	0.15	0.02	0.30	0.11
UBUS	Electricity	0.02%	0.02%	0.00	0.00	0.00	0.00	0.03	0.01
UBUS	Natural Gas	0.02%	0.03%	0.02	0.02	19.40	0.00	0.06	0.02

Existing inYear 2045: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County

<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2024.

	Pass. Vehicles	Trucks
Fleet Mix - San Mateo (K)	96%	4%
Passenger Vehicles	92%	8%
	Trucks	EMFAC default

Daily VMT		1,086,259		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.35%	0.36%	0.10	3.97	0.65	0.08	0.51	0.18
All Other Buses	Natural Gas	0.01%	0.01%	0.00	0.01	0.55	0.00	0.01	0.00
LDA	Gasoline	29.09%	30.13%	1.86	13.15	295.16	1.53	10.66	3.37
LDA	Diesel	0.02%	0.02%	0.00	0.01	0.05	0.00	0.01	0.00
LDA	Electricity	4.45%	4.61%	0.00	0.00	0.00	0.00	1.32	0.38
LDA	Plug-in Hybrid	1.40%	1.45%	0.04	0.09	5.59	0.04	0.41	0.12
LDT1	Gasoline	3.56%	3.69%	0.26	1.79	39.59	0.22	1.43	0.46
LDT1	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Electricity	0.13%	0.13%	0.00	0.00	0.00	0.00	0.04	0.01
LDT1	Plug-in Hybrid	0.09%	0.09%	0.00	0.01	0.35	0.00	0.03	0.01
LDT2	Gasoline	30.93%	32.04%	2.86	16.67	381.76	1.96	12.40	3.96
LDT2	Diesel	0.12%	0.12%	0.03	0.08	0.36	0.01	0.06	0.02
LDT2	Electricity	0.97%	1.01%	0.00	0.00	0.00	0.00	0.29	0.08
LDT2	Plug-in Hybrid	0.85%	0.88%	0.02	0.05	3.40	0.02	0.25	0.07
LHD1	Gasoline	1.37%	0.77%	0.12	0.51	19.58	0.24	2.87	1.00
LHD1	Diesel	0.86%	0.48%	1.74	4.36	4.37	0.12	2.21	0.97
LHD1	Electricity	1.83%	1.03%	0.00	0.00	0.00	0.00	2.06	0.69
LHD2	Gasoline	0.16%	0.09%	0.01	0.07	2.23	0.03	0.37	0.13
LHD2	Diesel	0.40%	0.22%	0.95	2.55	2.41	0.06	1.18	0.52
LHD2	Electricity	0.44%	0.25%	0.00	0.00	0.00	0.00	0.57	0.19
WCY	Gasoline	0.48%	0.49%	8.46	5.21	106.39	0.02	0.21	0.08
MDV	Gasoline	17.99%	18.63%	1.74	10.12	228.17	1.38	7.26	2.32
MDV	Diesel	0.19%	0.20%	0.02	0.04	0.62	0.01	0.08	0.03
MDV	Electricity	0.88%	0.91%	0.00	0.00	0.00	0.00	0.26	0.07
MDV	Plug-in Hybrid	0.55%	0.57%	0.01	0.03	2.18	0.01	0.16	0.05
MH	Gasoline	0.05%	0.05%	0.01	0.25	0.20	0.02	0.07	0.03
MH	Diesel	0.03%	0.03%	0.05	1.63	0.15	0.01	0.05	0.02
Motor Coach	Diesel	0.05%	0.06%	0.01	1.19	0.05	0.02	0.15	0.07
OBUS	Gasoline	0.02%	0.03%	0.01	0.12	0.15	0.01	0.03	0.01
OBUS	Electricity	0.03%	0.03%	0.00	0.00	0.00	0.00	0.02	0.01
PTO	Diesel	0.02%	0.01%	0.01	1.16	0.08	0.01	0.00	0.00
PTO	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.02%	0.00	0.04	0.09	0.00	0.03	0.01
SBUS	Diesel	0.01%	0.01%	0.00	0.10	0.01	0.00	0.02	0.01
SBUS	Electricity	0.02%	0.02%	0.00	0.00	0.00	0.00	0.02	0.01
SBUS	Natural Gas	0.00%	0.00%	0.00	0.00	0.12	0.00	0.00	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.02%	0.01%	0.00	0.07	0.01	0.00	0.02	0.01
T6 CAIRP Class 7	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.04%	0.02%	0.01	0.37	0.05	0.01	0.06	0.02
T6 Instate Delivery Class 4	Electricity	0.05%	0.03%	0.00	0.00	0.00	0.00	0.04	0.01
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.03%	0.02%	0.01	0.30	0.04	0.01	0.05	0.02
T6 Instate Delivery Class 5	Electricity	0.04%	0.02%	0.00	0.00	0.00	0.00	0.03	0.01
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.07%	0.04%	0.01	0.63	0.09	0.02	0.11	0.04
T6 Instate Delivery Class 6	Electricity	0.08%	0.04%	0.00	0.00	0.00	0.00	0.07	0.02
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.09	0.00	0.00	0.00
T6 Instate Delivery Class 7	Diesel	0.04%	0.02%	0.01	0.56	0.06	0.01	0.06	0.02
T6 Instate Delivery Class 7	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.02	0.01
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.07	0.00	0.00	0.00
T6 Instate Other Class 4	Diesel	0.06%	0.03%	0.01	0.37	0.06	0.01	0.08	0.03
T6 Instate Other Class 4	Electricity	0.06%	0.04%	0.00	0.00	0.00	0.00	0.05	0.02
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00
T6 Instate Other Class 5	Diesel	0.15%	0.08%	0.02	0.94	0.15	0.03	0.21	0.08
T6 Instate Other Class 5	Electricity	0.17%	0.09%	0.00	0.00	0.00	0.00	0.14	0.04
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.13	0.00	0.00	0.00

Existing inYear 2045: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County

<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2024.

	Pass. Vehicles	Trucks
Fleet Mix - San Mateo (K)	96%	4%
Passenger Vehicles	Trucks	EMFAC default
	92%	8%

Daily VMT				1,086,259						lbs/day			
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5				
T6 Instate Other Class 6	Diesel	0.09%	0.05%	0.01	0.60	0.09	0.02	0.13	0.05				
T6 Instate Other Class 6	Electricity	0.10%	0.06%	0.00	0.00	0.00	0.00	0.09	0.03				
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.08	0.00	0.00	0.00				
T6 Instate Other Class 7	Diesel	0.05%	0.03%	0.01	0.58	0.07	0.01	0.08	0.03				
T6 Instate Other Class 7	Electricity	0.04%	0.02%	0.00	0.00	0.00	0.00	0.03	0.01				
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.08	0.00	0.00	0.00				
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00				
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Instate Tractor Class 7	Diesel	0.02%	0.01%	0.00	0.25	0.03	0.00	0.03	0.01				
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00				
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00				
T6 OOS Class 7	Diesel	0.01%	0.01%	0.00	0.08	0.01	0.00	0.02	0.01				
T6 Public Class 4	Diesel	0.00%	0.00%	0.00	0.05	0.01	0.00	0.01	0.00				
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00				
T6 Public Class 5	Diesel	0.01%	0.01%	0.00	0.15	0.02	0.00	0.02	0.01				
T6 Public Class 5	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.01	0.00				
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.07	0.00	0.00	0.00				
T6 Public Class 6	Diesel	0.01%	0.00%	0.00	0.09	0.01	0.00	0.01	0.00				
T6 Public Class 6	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00				
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00				
T6 Public Class 7	Diesel	0.02%	0.01%	0.01	0.22	0.03	0.00	0.03	0.01				
T6 Public Class 7	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.01	0.00				
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.11	0.00	0.00	0.00				
T6 Utility Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00				
T6TS	Gasoline	0.14%	0.08%	0.04	0.23	0.61	0.05	0.20	0.07				
T6TS	Electricity	0.16%	0.09%	0.00	0.00	0.00	0.00	0.13	0.04				
T7 CAIRP Class 8	Diesel	0.11%	0.06%	0.03	3.02	0.10	0.03	0.37	0.17				
T7 CAIRP Class 8	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.06	0.02				
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00				
T7 NNOOS Class 8	Diesel	0.16%	0.09%	0.04	5.10	0.14	0.04	0.57	0.25				
T7 NOOS Class 8	Diesel	0.06%	0.03%	0.02	1.91	0.05	0.02	0.21	0.09				
T7 Other Port Class 8	Diesel	0.01%	0.01%	0.00	0.30	0.02	0.00	0.04	0.01				
T7 Other Port Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00				
T7 POAK Class 8	Diesel	0.03%	0.02%	0.01	1.07	0.05	0.01	0.12	0.05				
T7 POAK Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.02	0.00				
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00				
T7 Public Class 8	Diesel	0.03%	0.03%	0.03	2.29	0.17	0.02	0.18	0.06				
T7 Public Class 8	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.07	0.02				
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.07	0.00	0.00	0.00				
T7 Single Concrete/Transit Mix	Diesel	0.01%	0.00%	0.00	0.16	0.01	0.00	0.03	0.01				
T7 Single Concrete/Transit Mix	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.02	0.01				
T7 Single Concrete/Transit Mix	Natural Gas	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00				
T7 Single Dump Class 8	Diesel	0.03%	0.02%	0.01	0.82	0.04	0.01	0.11	0.04				
T7 Single Dump Class 8	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.05	0.02				
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	0.00	0.01	0.21	0.00	0.01	0.00				
T7 Single Other Class 8	Diesel	0.05%	0.03%	0.01	1.26	0.06	0.02	0.16	0.06				
T7 Single Other Class 8	Electricity	0.04%	0.02%	0.00	0.00	0.00	0.00	0.08	0.02				
T7 Single Other Class 8	Natural Gas	0.00%	0.00%	0.00	0.02	0.33	0.00	0.01	0.00				
T7 SWCV Class 8	Diesel	0.01%	0.00%	0.01	1.16	0.02	0.01	0.05	0.02				

Existing inYear 2045: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County

<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2024.

	Pass. Vehicles	Trucks	
Fleet Mix - San Mateo (K)	96%	4%	
Passenger Vehicles	Trucks	EMFAC default	
	92%	8%	

Daily VMT		1,086,259		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
17 SWCV Class 8	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.11	0.04
17 SWCV Class 8	Natural Gas	0.05%	0.03%	0.02	0.39	12.22	0.00	0.28	0.09
17 Tractor Class 8	Diesel	0.10%	0.05%	0.02	2.72	0.11	0.03	0.33	0.14
17 Tractor Class 8	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.04	0.01
17 Tractor Class 8	Natural Gas	0.01%	0.00%	0.00	0.04	0.79	0.00	0.02	0.01
17 Utility Class 8	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00
17 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
171S	Gasoline	0.00%	0.00%	0.01	0.03	0.38	0.00	0.00	0.00
171S	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.02%	0.00	0.01	0.28	0.00	0.05	0.02
UBUS	Diesel	0.16%	0.16%	0.00	0.00	0.00	0.00	0.33	0.10

Year 2045: GP 2045 Update Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County

<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2024.

	Pass. Vehicles	Trucks	
Fleet Mix - San Mateo (K)	97%		3%
Passenger Vehicles		Trucks	EMFAC default
	92%	8%	

Daily VMT		1,335,160		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.35%	0.36%	0.12	4.88	0.80	0.10	0.63	0.23
All Other Buses	Natural Gas	0.01%	0.01%	0.00	0.02	0.68	0.00	0.01	0.00
LDA	Gasoline	29.09%	30.42%	2.29	16.16	362.79	1.88	13.11	4.14
LDA	Diesel	0.02%	0.02%	0.00	0.01	0.06	0.00	0.01	0.00
LDA	Electricity	4.45%	4.65%	0.00	0.00	0.00	0.00	1.62	0.46
LDA	Plug-in Hybrid	1.40%	1.46%	0.05	0.11	6.87	0.05	0.50	0.15
LDT1	Gasoline	3.56%	3.73%	0.32	2.21	48.67	0.27	1.76	0.56
LDT1	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Electricity	0.13%	0.13%	0.00	0.00	0.00	0.00	0.05	0.01
LDT1	Plug-in Hybrid	0.09%	0.09%	0.00	0.01	0.42	0.00	0.03	0.01
LDT2	Gasoline	30.93%	32.35%	3.52	20.50	469.24	2.41	15.24	4.87
LDT2	Diesel	0.12%	0.12%	0.04	0.09	0.44	0.01	0.07	0.03
LDT2	Electricity	0.97%	1.02%	0.00	0.00	0.00	0.00	0.35	0.10
LDT2	Plug-in Hybrid	0.85%	0.89%	0.03	0.07	4.18	0.03	0.30	0.09
LHD1	Gasoline	1.37%	0.60%	0.15	0.62	24.07	0.30	3.52	1.23
LHD1	Diesel	0.86%	0.38%	2.14	5.36	5.37	0.14	2.72	1.19
LHD1	Electricity	1.83%	0.80%	0.00	0.00	0.00	0.00	2.54	0.84
LHD2	Gasoline	0.16%	0.07%	0.02	0.09	2.75	0.04	0.46	0.16
LHD2	Diesel	0.40%	0.17%	1.17	3.13	2.96	0.08	1.45	0.64
LHD2	Electricity	0.44%	0.19%	0.00	0.00	0.00	0.00	0.70	0.23
MCY	Gasoline	0.48%	0.50%	10.40	6.40	130.76	0.03	0.25	0.10
MDV	Gasoline	17.99%	18.82%	2.13	12.44	280.45	1.70	8.92	2.85
MDV	Diesel	0.19%	0.20%	0.02	0.05	0.76	0.02	0.10	0.03
MDV	Electricity	0.88%	0.92%	0.00	0.00	0.00	0.00	0.32	0.09
MDV	Plug-in Hybrid	0.55%	0.57%	0.02	0.04	2.67	0.02	0.20	0.06
MH	Gasoline	0.05%	0.05%	0.02	0.30	0.24	0.03	0.09	0.03
MH	Diesel	0.03%	0.03%	0.07	2.00	0.19	0.01	0.06	0.03
Motor Coach	Diesel	0.05%	0.06%	0.02	1.46	0.06	0.02	0.18	0.08
OBUS	Gasoline	0.02%	0.03%	0.01	0.14	0.19	0.01	0.04	0.01
OBUS	Electricity	0.03%	0.03%	0.00	0.00	0.00	0.00	0.03	0.01
PTO	Diesel	0.02%	0.01%	0.01	1.42	0.10	0.01	0.00	0.00
PTO	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.02%	0.00	0.05	0.11	0.00	0.03	0.01
SBUS	Diesel	0.01%	0.01%	0.00	0.12	0.02	0.00	0.02	0.01
SBUS	Electricity	0.02%	0.00	0.00	0.00	0.00	0.00	0.02	0.01
SBUS	Natural Gas	0.00%	0.00%	0.00	0.01	0.15	0.00	0.00	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.02%	0.01%	0.00	0.09	0.01	0.00	0.03	0.01
T6 CAIRP Class 7	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.04%	0.02%	0.01	0.45	0.07	0.01	0.08	0.03
T6 Instate Delivery Class 4	Electricity	0.05%	0.02%	0.00	0.00	0.00	0.00	0.05	0.02
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.06	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.03%	0.02%	0.01	0.37	0.05	0.01	0.06	0.02
T6 Instate Delivery Class 5	Electricity	0.04%	0.02%	0.00	0.00	0.00	0.00	0.04	0.01
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.07%	0.03%	0.01	0.77	0.11	0.02	0.13	0.05
T6 Instate Delivery Class 6	Electricity	0.08%	0.03%	0.00	0.00	0.00	0.00	0.08	0.03
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.11	0.00	0.00	0.00
T6 Instate Delivery Class 7	Diesel	0.04%	0.02%	0.01	0.69	0.08	0.01	0.07	0.02
T6 Instate Delivery Class 7	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.02	0.01
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.09	0.00	0.00	0.00
T6 Instate Other Class 4	Diesel	0.06%	0.02%	0.01	0.46	0.07	0.02	0.10	0.04
T6 Instate Other Class 4	Electricity	0.06%	0.03%	0.00	0.00	0.00	0.00	0.07	0.02
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.06	0.00	0.00	0.00
T6 Instate Other Class 5	Diesel	0.15%	0.06%	0.02	1.16	0.18	0.04	0.26	0.09
T6 Instate Other Class 5	Electricity	0.17%	0.07%	0.00	0.00	0.00	0.00	0.17	0.05
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.15	0.00	0.00	0.00



Year 2045: GP 2045 Update Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County

<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2024.

	Pass. Vehicles	Trucks	
Fleet Mix - San Mateo (K)	97%		3%
Passenger Vehicles		Trucks	EMFAC default
	92%	8%	

Daily VMT		1,335,160		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
T6 Instate Other Class 6	Diesel	0.09%	0.04%	0.01	0.74	0.12	0.03	0.16	0.06
T6 Instate Other Class 6	Electricity	0.10%	0.05%	0.00	0.00	0.00	0.00	0.11	0.03
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.10	0.00	0.00	0.00
T6 Instate Other Class 7	Diesel	0.05%	0.02%	0.01	0.72	0.08	0.02	0.10	0.04
T6 Instate Other Class 7	Electricity	0.04%	0.02%	0.00	0.00	0.00	0.00	0.04	0.01
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.09	0.00	0.00	0.00
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.02%	0.01%	0.00	0.30	0.03	0.01	0.04	0.01
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 OOS Class 7	Diesel	0.01%	0.01%	0.00	0.09	0.01	0.00	0.02	0.01
T6 Public Class 4	Diesel	0.00%	0.00%	0.00	0.06	0.01	0.00	0.01	0.00
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.01%	0.01%	0.00	0.19	0.02	0.00	0.02	0.01
T6 Public Class 5	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.08	0.00	0.00	0.00
T6 Public Class 6	Diesel	0.01%	0.00%	0.00	0.11	0.01	0.00	0.01	0.00
T6 Public Class 6	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T6 Public Class 7	Diesel	0.02%	0.01%	0.01	0.28	0.03	0.01	0.04	0.01
T6 Public Class 7	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.02	0.00
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.14	0.00	0.00	0.00
T6 Utility Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.14%	0.06%	0.05	0.28	0.75	0.06	0.24	0.08
T6TS	Electricity	0.16%	0.07%	0.00	0.00	0.00	0.00	0.16	0.05
T7 CAIRP Class 8	Diesel	0.11%	0.05%	0.04	3.71	0.12	0.04	0.46	0.20
T7 CAIRP Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00	0.07	0.02
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T7 NNOOS Class 8	Diesel	0.16%	0.07%	0.05	6.27	0.18	0.05	0.70	0.31
T7 NOOS Class 8	Diesel	0.06%	0.03%	0.02	2.34	0.07	0.02	0.26	0.12
T7 Other Port Class 8	Diesel	0.01%	0.00%	0.00	0.36	0.02	0.00	0.04	0.02
T7 Other Port Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T7 POAK Class 8	Diesel	0.03%	0.02%	0.01	1.31	0.07	0.01	0.15	0.06
T7 POAK Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.02	0.01
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T7 Public Class 8	Diesel	0.05%	0.02%	0.04	2.81	0.21	0.02	0.22	0.08
T7 Public Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00	0.08	0.03
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.09	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Diesel		0.01%	0.00%	0.00	0.20	0.01	0.00	0.03	0.01
T7 Single Concrete/Transit Mix Electricity		0.01%	0.01%	0.00	0.00	0.00	0.00	0.03	0.01
T7 Single Concrete/Transit Mix Natural Gas		0.00%	0.00%	0.00	0.00	0.06	0.00	0.00	0.00
T7 Single Dump Class 8	Diesel	0.03%	0.01%	0.01	1.01	0.05	0.01	0.13	0.05
T7 Single Dump Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00	0.07	0.02
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	0.00	0.01	0.25	0.00	0.01	0.00
T7 Single Other Class 8	Diesel	0.05%	0.02%	0.01	1.54	0.08	0.02	0.19	0.08
T7 Single Other Class 8	Electricity	0.04%	0.02%	0.00	0.00	0.00	0.00	0.10	0.03
T7 Single Other Class 8	Natural Gas	0.00%	0.00%	0.00	0.02	0.41	0.00	0.01	0.00
T7 SWCV Class 8	Diesel	0.01%	0.00%	0.01	1.43	0.03	0.01	0.06	0.02

Year 2045: GP 2045 Update Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County

<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2024.

Fleet Mix - San Mateo (K)		Pass. Vehicles	Trucks
		97%	3%
Passenger Vehicles	Trucks	EMFAC default	
		92%	8%

Daily VMT		1,335,160		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
T7 SWCV Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00	0.14	0.04
T7 SWCV Class 8	Natural Gas	0.05%	0.02%	0.02	0.48	15.02	0.00	0.34	0.12
T7 Tractor Class 8	Diesel	0.10%	0.04%	0.03	3.34	0.14	0.03	0.41	0.17
T7 Tractor Class 8	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.05	0.01
T7 Tractor Class 8	Natural Gas	0.01%	0.00%	0.00	0.04	0.98	0.00	0.03	0.01
T7 Utility Class 8	Diesel	0.00%	0.00%	0.00	0.03	0.00	0.00	0.00	0.00
T7 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7IS	Gasoline	0.00%	0.00%	0.01	0.03	0.46	0.00	0.00	0.00
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.02%	0.00	0.01	0.35	0.00	0.06	0.02
UBUS	Electricity	0.16%	0.16%	0.00	0.00	0.00	0.00	0.40	0.13
		100%	100%	22.97	109.50	1366.30	7.62	61.58	20.62

Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region: San Mateo

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

		g/mile															2205E-03	
Vehicle Category	Fuel																VMT	% of VMT
		ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_RUNEX	PM10_PMTW	PM10_PMBW	PM10_Total	X	W	W	PM2.5_Total	CH4_RUNEX	N2O_RUNEX			
All Other Buses	Diesel	0.02992218	0.70613203	0.09671568	0.01103962	0.00700183	0.012	0.04611373	6.31E-02	0.00669893	0.0031	0.01148058	2.38E-02	1163.82047	0.00097178	0.18367249	65.988	0.356%
All Other Buses	Natural Gas	0.01132623	0.19637153	0.24250009	0	0.00112096	0.012	0.04611373	5.93E-02	0.00103048	0.0031	0.01148058	2.02E-02	1012.30704	0.78449911	0.20637025	493	0.003%
LDA	Gasoline	0.00784709	0.0380865	0.63777481	0.00267893	0.00126335	0.008	0.0067093	1.60E-02	0.0011616	0.002	0.00234825	5.51E-03	270.981297	0.00203807	0.00423553	7,454,000	40.412%
LDA	Diesel	0.02269578	0.18859334	0.30414418	0.00220047	0.01328481	0.008	0.00686916	2.82E-02	0.01271012	0.002	0.00240421	1.71E-02	232.22712	0.00105418	0.03658748	17,557	0.098%
LDA	Electricity	0	0	0	0	0	0.008	0.00437149	1.24E-02	0	0.002	0.00113302	3.53E-03	0	0	0	689,392	3.738%
LDA	Plug-In Hybrid	0.00131321	0.0031245	0.19605499	0.00129759	0.00062804	0.008	0.0037331	1.24E-02	0.00057746	0.002	0.00132409	3.90E-03	131.254691	0.00040245	0.0005344	275,231	1.492%
LDT1	Gasoline	0.02094344	0.101173	1.098083	0.00313929	0.00166467	0.008	0.00806585	1.77E-02	0.00183062	0.002	0.00282305	6.35E-03	317.548623	0.00474116	0.00763537	738,709	3.951%
LDT1	Diesel	0.31355889	1.6560249	1.66811796	0.00395513	0.24718636	0.008	0.00949489	2.68E-01	0.33649318	0.002	0.00332323	2.42E-01	417.455317	0.01456421	0.06376238	8	0.000%
LDT1	Electricity	0	0	0	0	0	0.008	0.00438051	1.24E-02	0	0.002	0.00113318	3.53E-03	0	0	0	3,278	0.018%
LDT1	Plug-In Hybrid	0.00120587	0.00286911	0.18031126	0.00119173	0.00039614	0.008	0.00382273	1.22E-02	0.00036424	0.002	0.00133796	3.70E-03	120.546444	0.00036964	0.00049993	2,175	0.012%
LDT2	Gasoline	0.0081591	0.04783998	0.65081957	0.00223683	0.00125595	0.008	0.00779196	1.70E-02	0.0011548	0.002	0.00271879	5.87E-03	236.40222	0.00215446	0.00441292	4,914,801	26.446%
LDT2	Diesel	0.01254945	0.03960224	0.11933647	0.00287427	0.00472971	0.008	0.00783469	2.06E-02	0.00452511	0.002	0.00274214	9.27E-03	303.336711	0.00058929	0.04779082	18,954	0.103%
LDT2	Electricity	0	0	0	0	0	0.008	0.00435843	1.24E-02	0	0.002	0.00112545	3.53E-03	0	0	0	37,599	0.204%
LDT2	Plug-In Hybrid	0.00129715	0.0029991	0.18775511	0.00134232	0.00048452	0.008	0.00380353	1.26E-02	0.00044532	0.002	0.00133117	3.78E-03	125.644149	0.00038835	0.0003118	62,725	0.340%
LHD1	Gasoline	0.02703027	0.10805383	0.93245441	0.00827336	0.00150234	0.008	0.00780002	8.75E-02	0.00138135	0.002	0.00270001	3.07E-02	836.876444	0.00555729	0.00619736	401,258	2.172%
LHD1	Diesel	0.13222718	1.0275509	0.33151457	0.00592395	0.02557514	0.012	0.07800002	1.16E-01	0.02446877	0.003	0.02730001	5.48E-02	625.185793	0.0061417	0.09849828	191,581	1.038%
LHD1	Electricity	0	0	0	0	0	0.008	0.03900001	4.70E-02	0	0.002	0.01365	1.57E-02	0	0	0	3,231	0.019%
LHD2	Gasoline	0.02184558	0.12222832	0.81417031	0.00933776	0.00143241	0.008	0.00910003	1.06E-01	0.00131705	0.002	0.03185001	3.52E-02	944.54168	0.00477522	0.00737062	44,552	0.242%
LHD2	Diesel	0.12379274	0.75881655	0.28086325	0.00700139	0.0228956	0.012	0.09100003	1.26E-01	0.02190514	0.003	0.03185001	5.68E-02	738.892963	0.00574998	0.11641289	83,732	0.454%
LHD2	Electricity	0	0	0	0	0	0.008	0.04550001	5.35E-02	0	0.002	0.015925	1.79E-02	0	0	0	866	0.005%
MDV	Gasoline	0.03036518	0.51879253	11.0461003	0.00184795	0.00201235	0.004	0.013	1.80E-02	0.00188083	0.001	0.0042	7.08E-03	186.925611	0.14316799	0.03694645	76,675	0.416%
MDV	Gasoline	0.00954139	0.05843436	0.68617838	0.00389088	0.00215754	0.008	0.00978194	1.71E-02	0.00115627	0.002	0.00273679	5.89E-03	393.574265	0.00249247	0.00516066	2,823,183	15.306%
MDV	Diesel	0.00907404	0.03726143	0.17112637	0.00377382	0.00418234	0.008	0.00799491	2.02E-02	0.00400411	0.002	0.00279822	8.80E-03	398.271311	0.00042147	0.06374781	38,157	0.207%
MDV	Electricity	0	0	0	0	0	0.008	0.00435746	1.24E-02	0	0.002	0.00112511	3.53E-03	0	0	0	40,548	0.220%
MDV	Plug-In Hybrid	0.00126985	0.00302132	0.18962734	0.00125483	0.00053516	0.008	0.00379797	1.24E-02	0.00050861	0.002	0.00112993	3.84E-03	126.929616	0.00039062	0.00032054	35,015	0.190%
MH	Gasoline	0.040991	0.31412021	1.13779187	0.01924367	0.00176819	0.012	0.04501744	5.88E-02	0.00162578	0.003	0.0157561	2.04E-02	1946.55393	0.01173793	0.02115443	7,786	0.042%
MH	Diesel	0.09076077	1.09423268	0.26490774	0.01021884	0.03181864	0.016	0.04478758	1.13E-01	0.04937793	0.004	0.01567485	4.93E-02	1085.79508	0.00422497	0.17106748	3,694	0.020%
Motor Coach	Diesel	0.01482598	1.73473963	0.07442307	0.01678023	0.03030504	0.012	0.07409353	1.16E-01	0.02899353	0.003	0.02593442	5.79E-02	1772.45957	0.00508863	0.27918713	9,414	0.051%
ORIS	Gasoline	0.03913532	0.27668681	0.84779249	0.01703461	0.00110981	0.012	0.0447987	5.79E-02	0.00102043	0.003	0.01567955	1.97E-02	1723.10148	0.00847778	0.01000651	14,439	0.078%
ORIS	Electricity	0	0	0	0	0	0.012	0.02239735	3.44E-02	0	0.002	0.00783977	1.06E-02	0	0	0	80	0.000%
PTO	Diesel	0.02297403	0.10266037	0.26337995	0.01975703	0.00303749	0	0	5.04E-03	0.00481976	0	0	4.82E-03	2086.40909	0.00106708	0.3287146	5,213	0.028%
PTO	Electricity	0	0	0	0	0	0	0.009100	0	0	0.002	0.0011518	1.89E-02	789.441993	0.0196299	0.03913245	3,562	0.019%
SBUS	Gasoline	0.09610978	0.83352335	2.46020224	0.00788444	0.00125247	0.008	0.04491714	5.42E-02	0.0011518	0.002	0.015721	1.89E-02	789.441993	0.0196299	0.03913245	3,562	0.019%
SBUS	Diesel	0.06300019	4.89571162	0.20237165	0.01083596	0.02342109	0.012	0.04491714	6.03E-02	0.02240876	0.003	0.015721	4.11E-02	1143.11097	0.00311199	0.1802666	3,777	0.020%
SBUS	Electricity	0	0	0	0	0	0.00921401	0.02245857	3.17E-02	0	0.0023035	0.0078605	1.02E-02	0	0	0	37	0.000%
SBUS	Natural Gas	0.04786946	0.53521471	11.2426416	0	0.00387426	0.012	0.04491714	6.06E-02	0.00337835	0.003	0.015721	2.21E-02	1247.35391	3.35031972	0.25428125	159	0.001%
16 CARB Class 4	Diesel	0.01025504	0.43334266	0.64013321	0.01049766	0.00866136	0.012	0.04231382	6.30E-02	0.00826887	0.003	0.01480984	2.61E-02	1129.20762	0.00047618	0.17779849	120	0.001%
16 CARB Class 4	Electricity	0	0	0	0	0	0.012	0.02115691	3.32E-02	0	0.003	0.00740492	1.04E-02	0	0	0	1	0.000%
16 CARB Class 5	Diesel	0.00710998	0.39771475	0.03278018	0.01069723	0.00701702	0.012	0.04231382	6.13E-02	0.00671347	0.003	0.01480984	2.45E-02	1129.66283	0.00033024	0.17798884	179	0.001%
16 CARB Class 5	Electricity	0	0	0	0	0	0.012	0.02115691	3.32E-02	0	0.003	0.00740492	1.04E-02	0	0	0	1	0.000%
16 CARB Class 6	Diesel	0.00831284	0.36280794	0.03473928	0.010516	0.00746364	0.012	0.04231382	6.18E-02	0.00714077	0.003	0.01480984	2.50E-02	1110.52414	0.00038611	0.17496353	468	0.003%
16 CARB Class 6	Electricity	0	0	0	0	0	0.012	0.02115691	3.32E-02	0	0.003	0.00740492	1.04E-02	0	0	0	4	0.000%
16 CARB Class 7	Diesel	0.00640652	0.41576468	0.03269801	0.00969998	0.00699858	0.012	0.04231382	6.13E-02	0.00669592	0.003	0.01480984	2.45E-02	1045.45189	0.00029257	0.16471134	2,938	0.016%
16 CARB Class 7	Electricity	0	0	0	0	0	0.012	0.02115691	3.32E-02	0	0.003	0.00740492	1.04E-02	0	0	0	11	0.000%
16 Institute Delivery Class 4	Diesel	0.09887243	1.82481344	0.30745272	0.01117956	0.03938898	0.012	0.04756293	9.89E-02	0.03768008	0.003	0.01664703	5.73E-02	1180.60858	0.00499237	0.18605036	12,334	0.067%
16 Institute Delivery Class 4	Electricity	0	0	0	0	0	0.012	0.02378147	3.58E-02	0	0.003	0.00832351	1.13E-02	0	0	0	44	0.000%
16 Institute Delivery Class 4	Natural Gas	0.01219039	0.09224995	3.74050877	0	0.00182972	0.012	0.04756293	6.14E-02	0.00168239	0.003	0.01664703	2.13E-02	1050.17731	0.85318911	0.21408552	54	0.000%
16 Institute Delivery Class 5	Diesel	0.02651781	0.90547495	0.11590483	0.01114638	0.01063863	0.012	0.04756293	7.02E-02	0.01017669	0.003	0.01664703	2.98E-02	1177.0945	0.00123168	0.18345172	10,074	0.055%
16 Institute Delivery Class 5	Electricity	0	0	0	0	0	0.012	0.02378147	3.58E-02	0	0.003	0.00832351	1.13E-02	0	0	0	24	0.000%
16 Institute Delivery Class 5	Natural Gas	0.01193557	0.11872544	3.67728698	0	0.00167755	0.012	0.04756293	6.12E-02	0.00154245	0.003	0.01664703	2.12E-02	1042.05837	0.83703467	0.21430041	35	0.000%
16 Institute Delivery Class 6	Diesel	0.04279003	1.13877231	0.16003075	0.01111638	0.01809997	0.012	0.04756293	7.77E-02	0.01731687	0.003	0.01664703	3.03E-02	1175.92628	0.00198748	0.18492536	20,895	0.13%
16 Institute Delivery Class 6	Electricity	0	0	0	0	0	0.012	0.02378147	3.58E-02	0	0.003	0.00832351	1.13E-02	0	0	0	46	0.000%
16 Institute Delivery Class 6	Natural Gas	0.0121826	0.13032733	3.70175131	0	0.00178219	0.012	0.04756293	6.13E-02	0.00167385	0.003	0.01664703	2.13E-02	1046.04698	0.84801084	0.21296908	75	0.000%
16 Institute Delivery Class 7	Diesel	0.01134985	1.08634181	0.291371	0.01100674	0.00349649												

16 Institute Other Class 6	Diesel	0.03425769	1.02270728	0.12472095	0.01077623	0.0175341	0.012	0.04486375	7.446-02	0.01677559	0.003	0.01570231	3.556-02	11.38.00572	0.00159118	0.17929526	27.529	0.149%
16 Institute Other Class 6	Electricity	0	0	0	0	0	0	0.022423187	3.446-02	0	0.003	0.00785116	1.096-02	0	0	0	48	0.000%
16 Institute Other Class 6	Natural Gas	0.00930619	0.1097401	2.72447329	0	0.00121234	0.012	0.04486375	5.815-02	0.0011147	0.003	0.01570231	1.986-02	921.94605	0.65132808	0.18794473	78	0.000%
16 Institute Other Class 7	Diesel	0.01171178	0.89664427	0.07215098	0.00613447	0.012	0.04486375	6.306-02	0.0058691	0.003	0.01570231	2.466-02	1117.68228	0.00054398	0.1760913	12.874	0.070%	
16 Institute Other Class 7	Electricity	0	0	0	0	0	0	0.022423187	3.446-02	0	0.003	0.00785116	1.096-02	0	0	0	26	0.000%
16 Institute Other Class 7	Natural Gas	0.00829238	0.16350954	2.80074736	0	0.00091443	0.012	0.04486375	5.786-02	0.00084079	0.003	0.01570231	1.986-02	928.800902	0.61095059	0.18934214	330	0.002%
16 Institute Tractor Class 6	Diesel	0.04145581	0.92265429	0.1349743	0.01111696	0.01825618	0.012	0.04486375	7.516-02	0.01746643	0.003	0.01570231	3.626-02	1173.98949	0.00192551	0.18496252	539	0.003%
16 Institute Tractor Class 6	Electricity	0	0	0	0	0	0	0.022423187	3.446-02	0	0.003	0.00785116	1.096-02	0	0	0	1	0.000%
16 Institute Tractor Class 6	Natural Gas	0.00915791	0.12277767	2.73638859	0	0.00113462	0.012	0.04486375	5.806-02	0.00104324	0.003	0.01570231	1.976-02	898.336366	0.64094966	0.18313174	1	0.000%
16 Institute Tractor Class 7	Diesel	0.01040885	1.00673434	0.07470311	0.01009441	0.00602599	0.012	0.04486375	6.296-02	0.00576531	0.003	0.01570231	2.456-02	1066.00338	0.00048346	0.16784927	3.772	0.020%
16 Institute Tractor Class 7	Electricity	0	0	0	0	0	0	0.022423187	3.446-02	0	0.003	0.00785116	1.096-02	0	0	0	5	0.000%
16 Institute Tractor Class 7	Natural Gas	0.00858236	0.17525893	2.80144926	0	0.00083603	0.012	0.04486375	5.776-02	0.0007687	0.003	0.01570231	1.956-02	926.69983	0.62070225	0.18891382	73	0.000%
16 OCS Class 4	Diesel	0.01346778	0.50348907	0.04789567	0.01064268	0.01040146	0.012	0.04231382	6.476-02	0.0099515	0.003	0.01480984	2.786-02	1123.9017	0.00062554	0.17707117	73	0.000%
16 OCS Class 5	Diesel	0.00578429	0.41387947	0.03428896	0.01065131	0.00733529	0.012	0.04231382	6.164-02	0.00701797	0.003	0.01480984	2.486-02	1124.81299	0.00036156	0.17721474	101	0.001%
16 OCS Class 6	Diesel	0.01050451	0.41352529	0.04007229	0.01044373	0.00846493	0.012	0.04231382	6.306-02	0.00284227	0.003	0.01480984	2.611-02	1102.89234	0.00048791	0.17376114	363	0.001%
16 OCS Class 7	Diesel	0.006390544	0.42696328	0.03286021	0.00983343	0.00704831	0.012	0.04231382	6.146-02	0.00674234	0.003	0.01480984	2.466-02	1038.44297	0.00029682	0.16360711	1,912	0.010%
16 Public Class 4	Diesel	0.07501848	5.12357679	0.18146116	0.01173227	0.0253589	0.012	0.04616939	9.356-02	0.01615929	0.003	0.01615929	4.346-02	1238.96666	0.00348441	0.1951997	1,163	0.006%
16 Public Class 4	Electricity	0	0	0	0	0	0	0.02203047	3.511-02	0	0.003	0.00807964	1.111-02	0	0	0	7	0.000%
16 Public Class 4	Natural Gas	0.01248279	0.08071819	3.05530479	0	0.00148722	0.012	0.04616939	5.996-02	0.00155133	0.003	0.01615929	2.076-02	1025.49463	0.87365362	0.20905379	51	0.000%
16 Public Class 5	Diesel	0.04317123	2.45313064	0.13216337	0.01142144	0.0119271	0.012	0.04616939	7.016-02	0.01141114	0.003	0.01615929	3.066-02	1206.14164	0.00200519	0.19002811	3,863	0.021%
16 Public Class 5	Electricity	0	0	0	0	0	0	0.02203047	3.511-02	0	0.003	0.00807964	1.111-02	0	0	0	17	0.000%
16 Public Class 5	Natural Gas	0.01216373	0.13375292	3.08387464	0	0.00143502	0.012	0.04616939	5.966-02	0.00131944	0.003	0.01615929	2.056-02	1041.01356	0.85125333	0.21221702	342	0.002%
16 Public Class 6	Diesel	0.07373503	4.69315942	0.18314249	0.01160927	0.02824606	0.012	0.04616939	8.646-02	0.02702415	0.003	0.01615929	4.626-02	1225.97763	0.00342468	0.19315327	2,330	0.013%
16 Public Class 6	Electricity	0	0	0	0	0	0	0.02203047	3.511-02	0	0.003	0.00807964	1.111-02	0	0	0	12	0.000%
16 Public Class 6	Natural Gas	0.01232463	0.10703792	3.07382611	0	0.00156199	0.012	0.04616939	5.976-02	0.00143617	0.003	0.01615929	2.066-02	1025.16859	0.86258476	0.20898732	112	0.001%
16 Public Class 7	Diesel	0.08139376	5.31563753	0.18543723	0.01174898	0.03418884	0.012	0.04616939	9.246-02	0.03270984	0.003	0.01615929	5.196-02	1240.73079	0.0078062	0.19547764	6,330	0.034%
16 Public Class 7	Electricity	0	0	0	0	0	0	0.02203047	3.511-02	0	0.003	0.00807964	1.111-02	0	0	0	42	0.000%
16 Public Class 7	Natural Gas	0.01249466	0.07818063	3.06245452	0	0.00164916	0.012	0.04616939	5.956-02	0.00156232	0.003	0.01615929	2.076-02	1035.5048	0.87482044	0.21109443	390	0.002%
16 Utility Class 5	Diesel	0.00780538	0.50475978	0.03118872	0.01049575	0.00314232	0.012	0.04547467	6.066-02	0.00300639	0.003	0.01592385	2.196-02	1108.38676	0.00036256	0.17462678	337	0.002%
16 Utility Class 5	Electricity	0	0	0	0	0	0	0.022274833	3.476-02	0	0.003	0.00796192	1.106-02	0	0	0	3	0.000%
16 Utility Class 6	Natural Gas	0.00991781	0.20032588	2.84631486	0	0.00087613	0.012	0.04547467	5.846-02	0.00080659	0.003	0.01592385	1.976-02	982.75949	0.64614364	0.20092352	4	0.000%
16 Utility Class 6	Diesel	0.00696904	0.51139519	0.03109992	0.010456	0.00301703	0.012	0.04547467	6.056-02	0.00288652	0.003	0.01592385	2.186-02	1104.1883	0.00032369	0.17396532	64	0.000%
16 Utility Class 6	Electricity	0	0	0	0	0	0	0.022274833	3.476-02	0	0.003	0.00796192	1.106-02	0	0	0	1	0.000%
16 Utility Class 7	Natural Gas	0.00973967	0.1988158	2.84501193	0	0.00088416	0.012	0.04547467	5.846-02	0.00081296	0.003	0.01592385	1.976-02	979.669749	0.64950342	0.19971209	1	0.000%
16 Utility Class 7	Diesel	0.0057524	0.42781173	0.04569146	0.01046457	0.00720232	0.012	0.04547467	6.056-02	0.00238842	0.003	0.01592385	2.186-02	1105.09277	0.00020718	0.17510782	88	0.000%
16 Utility Class 7	Electricity	0	0	0	0	0	0	0.022274833	3.476-02	0	0.003	0.00796192	1.106-02	0	0	0	1	0.000%
16 Utility Class 7	Natural Gas	0.00983411	0.21040506	2.83305576	0	0.00082395	0.012	0.04547467	5.836-02	0.0007576	0.003	0.01592385	1.976-02	984.750246	0.648827638	0.20074778	2	0.000%
16TS	Gasoline	0.06176647	0.3927064	1.27490259	0.01718406	0.00148987	0.012	0.04041744	5.886-02	0.00136116	0.003	0.0157861	2.016-02	1738.21699	0.01266592	0.020119992	46,997	0.253%
16TS	Electricity	0	0	0	0	0	0	0.022250872	3.456-02	0	0.003	0.00787805	1.096-02	0	0	0	429	0.002%
17 CARP Class B	Diesel	0.01297662	1.55575971	0.05872219	0.01460206	0.03267654	0.03600001	0.07409135	1.436-01	0.03126297	0.009	0.02393442	6.626-02	1542.02551	0.00060273	0.24294675	17,134	0.093%
17 CARP Class B	Electricity	0	0	0	0	0	0	0.03600001	0.03704712	7.206-02	0	0.009	0.01296712	2.296-02	0	0	92	0.001%
17 CARP Class B	Natural Gas	0.0132665	0.21784377	3.87351086	0	0.00183204	0.03600001	0.07409135	1.126-01	0.0016845	0.009	0.02393442	3.666-02	1140.19467	0.92839958	0.23243614	39	0.000%
17HNOCS Class B	Diesel	0.0124209	1.49310907	0.03140976	0.01442888	0.03093801	0.03600001	0.07409135	1.416-01	0.02193965	0.009	0.02393442	6.456-02	1523.73675	0.00057692	0.24006535	20,499	0.111%
17HNOCS Class B	Diesel	0.01324764	1.58816128	0.03943705	0.01450253	0.03344495	0.03600001	0.07409135	1.446-01	0.03198814	0.009	0.02393442	6.496-02	1531.31276	0.00061533	0.24129046	7,449	0.040%
17 Other Port Class B	Diesel	0.01186819	1.67320182	0.10522671	0.01574903	0.02028279	0.03600001	0.0852388	1.426-01	0.01940537	0.009	0.02393358	5.826-02	1663.15122	0.00055153	0.26203015	1,626	0.009%
17 Other Port Class B	Electricity	0	0	0	0	0	0	0.03600001	0.04261194	7.866-02	0	0.009	0.01491679	2.396-02	0	0	3	0.000%
17 POAK Class B	Diesel	0.01230849	1.75689311	0.11033136	0.0156889	0.02020388	0.03600001	0.0852388	1.416-01	0.01932958	0.009	0.02393358	5.826-02	1656.78841	0.0005717	0.26102769	5,636	0.031%
17 POAK Class B	Electricity	0	0	0	0	0	0	0.03600001	0.04261194	7.866-02	0	0.009	0.01491679	2.396-02	0	0	10	0.000%
17 POAK Class B	Natural Gas	0.0167608	0.17252782	4.97691357	0	0.00252429	0.03600001	0.0852388	1.246-01	0.00232099	0.009	0.02393358	4.126-02	1211.68846	1.17306642	0.24701021	3	0.000%
17 Public Class B	Diesel	0.010494703	7.64499149	0.35230066	0.01767539	0.04520286	0.03600001	0.11491365	1.936-01	0.04224722	0.009	0.03690278	9.136-02	1866.27912	0.00046752	0.2940803	14,439	0.078%
17 Public Class B	Electricity	0	0	0	0	0	0	0.03600001	0.04920319	8.526-02	0	0.009	0.01722287	2.626-02	0	0	71	0.000%
17 Public Class B	Natural Gas	0.02228771	0.51791291	3.39481776	0	0.00286167	0.03600001	0.12696554	1.426-01	0.00263111	0.009	0.03394379	4.766-02	1584.99262	1.76983544	0.32311111	78	0.000%
17 Single Concrete/Transit Mix CB	Diesel	0.00859632	0.97776935	0.03442292	0.01564224	0.01495821	0.03600001	0.08035483	1.316-01	0.01431112	0.009	0.02812419	5.146-02	1651.87167	0.00039928	0.26025305	3,436	0.019%
17 Single Concrete/Transit Mix CB	Electricity	0	0	0	0	0	0	0.02600001	0.04071726	7.626-02	0	0.009	0.01406204	2.316-02	0	0	29	0.000%
17 Single Concrete/Transit Mix CB	Natural Gas	0.0152032	0.27090667	5.46593037	0	0.00202711	0.03600001	0.0803548	1.186-01	0.00185889	0.009	0.02812411	3.906-02	1213.39182	1.66405144	0.24735786	207	0.001%
17 Single Dump Class B	Diesel	0.0151441	1.53429576	0.09562574	0.0159													

US\$	Natural Gas	0.0585885	0.05542447	46.5063262	0	0.00028462	0.03096344	0.11000003	1.41E-01	0.00027231	0.00774086	0.03850001	4.65E-02	1262.65644	4.10053116	0.25740078	4.515	0.024%	18,445,170	100.000%
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Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region: San Mateo

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC202x Categori

Units: miles/day for CVMT and EVMT, trips/

		lbs/Mile										CO2/mile* AA/CCL_RUNE				1.0E-06	
Vehicle Category	Fuel	ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_RUNEX	PM10_PMTW	PM10_PMBW	PM10_Total	X	W	W	W	PM2.5_Total	X	CH4_RUNEX	N2O_RUNEX
All Other Buses	Diesel	4.613E-05	1.557E-03	2.112E-04	2.414E-05	1.544E-05	2.646E-05	1.017E-04	1.436E-04	1.477E-05	6.614E-06	3.560E-05	3.676E-05	2.170E+00	2.142E-06	4.049E-04	
All Other Buses	Natural Gas	2.477E-05	4.339E-04	7.154E-03	0.000E+00	2.477E-06	2.646E-05	1.017E-04	1.306E-04	2.272E-06	6.614E-06	3.560E-05	4.449E-05	2.232E+00	1.734E-03	4.550E-04	
LDA	Gasoline	1.730E-05	8.397E-05	1.406E-03	5.904E-06	2.781E-06	1.764E-05	1.479E-05	3.521E-05	2.561E-06	4.409E-06	5.177E-06	1.215E-05	5.974E-01	4.493E-06	9.338E-06	
LDA	Diesel	5.004E-05	4.158E-04	6.703E-04	4.851E-06	2.929E-05	1.764E-05	1.514E-05	6.307E-05	2.802E-05	4.409E-06	5.300E-06	3.773E-05	3.120E-01	2.324E-06	8.044E-05	
LDA	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.637E-06	2.727E-05	0.000E+00	4.409E-06	3.373E-06	7.789E-06	0.000E+00	0.000E+00	0.000E+00	
LDA	Plug-in Hybrid	2.893E-06	6.888E-06	4.322E-04	2.861E-06	1.381E-06	1.764E-05	8.340E-06	2.736E-05	1.273E-06	4.409E-06	2.919E-06	8.601E-06	2.894E-01	8.873E-07	1.178E-06	
LD1	Gasoline	4.617E-05	2.231E-04	2.421E-03	6.921E-06	3.670E-06	1.764E-05	1.778E-05	3.909E-05	3.374E-06	4.409E-06	6.224E-06	1.401E-05	7.501E-01	1.045E-05	1.683E-05	
LD1	Diesel	6.913E-04	3.611E-03	3.678E-03	8.719E-06	1.449E-04	1.764E-05	2.093E-05	5.835E-04	5.214E-04	4.409E-06	7.334E-06	5.311E-04	9.302E-01	3.311E-05	1.450E-04	
LD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.637E-06	2.729E-05	0.000E+00	4.409E-06	3.380E-06	7.789E-06	0.000E+00	0.000E+00	0.000E+00	
LD1	Plug-in Hybrid	2.658E-06	6.332E-06	3.971E-04	2.627E-06	8.733E-07	1.764E-05	8.428E-06	2.694E-05	8.030E-07	4.409E-06	2.950E-06	8.162E-06	2.658E-01	8.149E-07	1.082E-06	
LD2	Gasoline	1.799E-05	1.055E-04	1.635E-03	7.114E-06	2.769E-06	1.764E-05	1.713E-05	3.733E-05	2.446E-06	4.409E-06	5.994E-06	1.295E-05	7.194E-01	4.750E-06	1.017E-05	
LD2	Diesel	2.767E-05	8.731E-05	2.631E-04	6.337E-06	1.043E-05	1.764E-05	1.727E-05	4.534E-05	9.976E-06	4.409E-06	6.045E-06	2.043E-05	6.687E-01	1.285E-06	1.054E-04	
LD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.609E-06	2.725E-05	0.000E+00	4.409E-06	3.363E-06	7.772E-06	0.000E+00	0.000E+00	0.000E+00	
LD2	Plug-in Hybrid	2.727E-06	6.594E-06	4.139E-04	2.739E-06	1.068E-06	1.764E-05	8.365E-06	2.709E-05	9.617E-07	4.409E-06	2.933E-06	8.326E-06	2.770E-01	8.496E-07	1.126E-06	
HD1	Gasoline	5.939E-05	2.382E-04	2.036E-03	1.824E-05	3.312E-06	1.764E-05	1.720E-04	1.929E-04	3.045E-06	4.409E-06	6.019E-06	6.744E-05	1.845E+00	1.235E-05	1.364E-05	
HD1	Diesel	2.915E-04	2.263E-03	7.309E-04	1.306E-05	2.638E-05	2.646E-05	1.720E-04	2.448E-04	5.594E-05	6.614E-06	6.019E-05	1.207E-04	1.378E+00	1.354E-05	2.171E-04	
HD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	8.598E-05	1.034E-04	0.000E+00	4.409E-06	3.009E-06	3.430E-05	0.000E+00	0.000E+00	0.000E+00	
HD2	Gasoline	4.817E-05	2.695E-04	1.795E-03	2.059E-05	1.158E-06	1.764E-05	2.006E-04	2.214E-04	2.904E-06	4.409E-06	7.022E-05	7.753E-05	2.082E+00	1.033E-05	1.626E-05	
HD2	Diesel	2.729E-04	1.673E-03	6.192E-04	1.544E-05	4.048E-05	2.646E-05	2.006E-04	2.735E-04	4.829E-05	6.614E-06	7.022E-05	1.251E-04	1.629E+00	1.268E-05	2.566E-04	
HD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	1.003E-04	1.179E-04	0.000E+00	4.409E-06	3.511E-05	3.552E-05	0.000E+00	0.000E+00	0.000E+00	
HDV	Gasoline	2.051E-03	1.144E-03	2.615E-02	4.074E-06	4.404E-06	8.818E-06	2.444E-05	3.971E-05	4.147E-06	2.203E-06	9.299E-06	1.561E-05	4.171E-01	3.300E-04	6.150E-01	
HDV	Diesel	2.192E-05	1.388E-04	1.513E-03	8.578E-06	2.772E-06	1.764E-05	1.724E-05	3.765E-05	2.549E-06	4.409E-06	6.169E-06	1.940E-05	8.780E-01	9.292E-07	1.383E-04	
HDV	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.640E-06	2.724E-05	0.000E+00	4.409E-06	3.362E-06	7.771E-06	0.000E+00	0.000E+00	0.000E+00	
HDV	Plug-in Hybrid	2.800E-06	6.661E-06	4.818E-04	2.764E-06	1.191E-06	1.764E-05	8.377E-06	2.723E-05	1.121E-06	4.409E-06	2.925E-06	8.462E-06	2.798E-01	8.612E-07	1.148E-06	
MH	Gasoline	1.082E-04	6.923E-04	2.550E-03	4.242E-05	3.898E-06	2.646E-05	9.923E-05	1.294E-04	3.584E-06	6.614E-06	3.474E-05	4.493E-05	4.591E+00	2.587E-05	4.644E-05	
MH	Diesel	2.005E-04	6.826E-03	6.274E-04	2.248E-05	1.123E-04	3.527E-05	9.873E-05	2.492E-04	1.092E-04	1.881E-06	3.454E-05	1.527E-04	2.394E+00	6.314E-06	1.771E-04	
Motor Coach	Diesel	3.269E-05	3.824E-05	1.641E-04	3.699E-05	6.681E-05	2.646E-05	1.634E-04	2.566E-04	6.392E-05	6.614E-06	5.718E-05	1.277E-04	3.907E+00	1.518E-06	6.153E-04	
ORIS	Gasoline	8.716E-05	6.100E-04	1.849E-03	3.755E-05	2.447E-06	2.646E-05	9.874E-05	1.277E-04	2.250E-06	6.614E-06	3.457E-05	4.343E-05	3.799E+00	1.849E-05	3.329E-05	
ORIS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.913E-05	7.584E-05	0.000E+00	6.614E-06	1.728E-05	2.390E-05	0.000E+00	0.000E+00	0.000E+00	
PTD	Diesel	5.005E-05	8.846E-05	3.804E-04	4.354E-05	1.111E-05	0.000E+00	0.000E+00	1.111E-05	1.063E-05	0.000E+00	0.000E+00	1.063E-05	4.600E+00	3.325E-06	7.247E-04	
PTD	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
SRIS	Gasoline	2.119E-04	1.841E-03	3.242E-03	1.721E-05	2.761E-06	1.764E-05	9.902E-05	1.194E-04	2.339E-06	4.409E-06	3.446E-05	4.161E-05	1.740E+00	4.328E-05	6.628E-05	
SRIS	Diesel	1.477E-04	1.033E-02	4.661E-04	2.389E-05	3.164E-05	2.646E-05	9.902E-05	1.771E-04	4.940E-05	6.614E-06	3.446E-05	9.007E-05	2.233E+00	6.861E-06	1.973E-04	
SRIS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.031E-05	4.931E-05	6.983E-05	0.000E+00	5.078E-06	1.733E-05	2.241E-05	0.000E+00	0.000E+00	0.000E+00	
SRIS	Natural Gas	1.033E-04	1.180E-03	2.479E-02	0.000E+00	8.100E-06	2.646E-05	9.902E-05	1.336E-04	7.448E-06	6.614E-06	3.446E-05	4.872E-05	2.750E+00	7.386E-03	4.604E-04	
T6 CARP Class 4	Diesel	2.264E-05	9.533E-04	8.846E-05	2.358E-05	1.910E-05	2.646E-05	9.329E-05	1.388E-04	1.837E-05	6.614E-06	3.264E-05	5.753E-05	2.491E+00	1.050E-06	9.924E-04	
T6 CARP Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.644E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00	
T6 CARP Class 5	Diesel	1.567E-05	8.768E-04	7.227E-03	2.358E-05	1.547E-05	2.646E-05	9.329E-05	1.352E-04	1.480E-05	6.614E-06	3.264E-05	5.406E-05	2.490E+00	7.280E-07	3.924E-04	
T6 CARP Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.644E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00	
T6 CARP Class 6	Diesel	1.835E-05	7.998E-04	7.645E-05	2.318E-05	1.445E-05	2.646E-05	9.329E-05	1.362E-04	1.574E-05	6.614E-06	3.264E-05	5.501E-05	2.448E+00	8.512E-07	3.857E-04	
T6 CARP Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.644E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00	
T6 CARP Class 7	Diesel	1.412E-05	9.166E-04	2.209E-03	2.183E-05	1.543E-05	2.646E-05	9.329E-05	1.852E-04	1.476E-05	6.614E-06	3.264E-05	5.403E-05	2.503E+00	6.506E-07	6.631E-04	
T6 CARP Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.644E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00	
T6 Instate Delivery Class 4	Diesel	2.180E-04	4.023E-03	6.778E-04	2.465E-05	8.683E-05	2.646E-05	1.049E-04	2.818E-04	8.307E-05	6.614E-06	3.670E-05	1.264E-04	2.603E+00	1.012E-05	4.101E-04	
T6 Instate Delivery Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.243E-05	7.888E-05	0.000E+00	6.614E-06	1.833E-05	2.496E-05	0.000E+00	0.000E+00	0.000E+00	
T6 Instate Delivery Class 4	Natural Gas	2.687E-05	2.034E-04	8.244E-03	0.000E+00	4.034E-06	2.646E-05	1.049E-04	1.535E-04	3.709E-06	6.614E-06	3.670E-05	4.702E-05	2.315E+00	1.881E-03	4.720E-04	
T6 Instate Delivery Class 5	Diesel	3.846E-05	1.994E-05	2.555E-04	2.457E-05	2.345E-05	2.646E-05	1.049E-04	1.548E-04	2.244E-05	6.614E-06	3.670E-05	6.575E-05	2.395E+00	2.715E-06	4.088E-04	
T6 Instate Delivery Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.243E-05	7.888E-05	0.000E+00	6.614E-06	1.833E-05	2.496E-05	0.000E+00	0.000E+00	0.000E+00	
T6 Instate Delivery Class 5	Natural Gas	2.637E-05	2.617E-04	8.107E-03	0.000E+00	3.498E-06	2.646E-05	1.049E-04	1.350E-04	3.400E-06	6.614E-06	3.670E-05	6.671E-05	2.297E+00	8.840E-03	4.683E-04	
T6 Instate Delivery Class 6	Diesel	2.433E-05	1.211E-03	1.211E-03	2.318E-05	1.445E-05	2.646E-05	9.329E-05	1.362E-04	1.574E-05	6.614E-06	3.264E-05	5.501E-0				

16 Institute Other Class 6	Diesel	7.552E-05	2.266E-03	27.50E-04	2.376E-05	3.866E-03	2.646E-05	9.891E-03	1.640E-04	3.698E-03	6.614E-06	3.462E-05	7.821E-03	2.509E+00	3.508E-06	3.953E-04
16 Institute Other Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.948E-05	7.291E-03	0.000E+00	6.614E-06	1.721E-05	2.392E-05	0.000E+00	0.000E+00	0.000E+00
16 Institute Other Class 6	Natural Gas	2.052E-05	2.419E-04	6.006E-03	0.000E+00	2.673E-06	2.646E-05	9.891E-03	1.280E-04	2.457E-06	6.614E-06	3.462E-05	4.369E-03	2.033E+00	1.436E-03	4.143E-04
16 Institute Other Class 7	Diesel	2.582E-05	1.977E-03	1.591E-04	2.333E-05	1.352E-03	2.646E-05	9.891E-03	1.389E-04	1.294E-05	6.614E-06	3.462E-05	5.417E-03	2.464E+00	1.199E-06	3.882E-04
16 Institute Other Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.948E-05	7.291E-03	0.000E+00	6.614E-06	1.721E-05	2.392E-05	0.000E+00	0.000E+00	0.000E+00
16 Institute Other Class 7	Natural Gas	1.924E-05	3.603E-04	6.175E-03	0.000E+00	2.014E-06	2.646E-05	9.891E-03	1.274E-04	1.846E-06	6.614E-06	3.462E-05	4.308E-03	2.048E+00	1.347E-03	4.174E-04
16 Institute Tractor Class 6	Diesel	9.199E-05	2.034E-03	2.974E-04	2.451E-05	4.022E-03	2.646E-05	9.891E-03	1.656E-04	3.851E-03	6.614E-06	3.462E-05	7.974E-03	2.588E+00	4.245E-06	4.078E-04
16 Institute Tractor Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.948E-05	7.291E-03	0.000E+00	6.614E-06	1.721E-05	2.392E-05	0.000E+00	0.000E+00	0.000E+00
16 Institute Tractor Class 6	Natural Gas	2.019E-05	2.707E-04	6.033E-03	0.000E+00	2.001E-06	2.646E-05	9.891E-03	1.279E-04	2.300E-06	6.614E-06	3.462E-05	4.333E-03	1.980E+00	1.413E-03	4.037E-04
16 Institute Tractor Class 7	Diesel	2.293E-05	2.219E-03	1.647E-04	2.223E-05	1.328E-03	2.646E-05	9.891E-03	1.386E-04	1.271E-03	6.614E-06	3.462E-05	5.394E-03	2.350E+00	1.066E-06	3.703E-04
16 Institute Tractor Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.948E-05	7.291E-03	0.000E+00	6.614E-06	1.721E-05	2.392E-05	0.000E+00	0.000E+00	0.000E+00
16 Institute Tractor Class 7	Natural Gas	1.892E-05	3.864E-04	6.176E-03	0.000E+00	1.843E-06	2.646E-05	9.891E-03	1.272E-04	1.695E-06	6.614E-06	3.462E-05	4.293E-03	2.043E+00	1.326E-03	4.161E-04
16 OGS Class 4	Diesel	2.969E-05	1.110E-03	1.056E-04	2.346E-05	2.293E-03	2.646E-05	9.329E-03	1.427E-04	2.194E-03	6.614E-06	3.265E-05	6.120E-03	2.478E+00	1.379E-06	3.904E-04
16 OGS Class 5	Diesel	1.714E-05	9.124E-04	7.539E-05	2.348E-05	1.617E-03	2.646E-05	9.329E-03	1.359E-04	1.547E-03	6.614E-06	3.264E-05	5.474E-03	2.480E+00	7.971E-07	3.907E-04
16 OGS Class 6	Diesel	2.314E-05	8.117E-04	8.839E-05	2.302E-05	1.911E-03	2.646E-05	9.329E-03	1.389E-04	1.829E-03	6.614E-06	3.265E-05	5.755E-03	2.311E+00	1.076E-06	3.831E-04
16 OGS Class 7	Diesel	1.409E-05	9.413E-04	7.244E-05	2.168E-05	1.554E-03	2.646E-05	9.329E-03	1.353E-04	1.487E-03	6.614E-06	3.265E-05	5.413E-03	2.289E+00	6.544E-07	3.607E-04
16 Public Class 4	Diesel	1.654E-04	1.130E-02	4.000E-04	2.584E-05	3.911E-03	2.646E-05	1.018E-04	1.841E-04	5.349E-03	6.614E-06	3.562E-05	9.573E-03	2.731E+00	7.682E-06	4.303E-04
16 Public Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.733E-03	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
16 Public Class 4	Natural Gas	2.752E-05	1.779E-04	6.736E-03	0.000E+00	3.720E-06	2.646E-05	1.018E-04	1.320E-04	3.420E-06	6.614E-06	3.562E-05	4.566E-03	2.261E+00	1.926E-03	4.609E-04
16 Public Class 5	Diesel	9.518E-05	3.408E-03	2.914E-04	2.318E-05	2.629E-03	2.646E-05	1.018E-04	1.545E-04	2.516E-03	6.614E-06	3.562E-05	6.740E-03	2.639E+00	4.421E-06	4.189E-04
16 Public Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.733E-03	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
16 Public Class 5	Natural Gas	2.481E-05	2.549E-04	6.799E-03	0.000E+00	3.164E-06	2.646E-05	1.018E-04	1.314E-04	2.999E-06	6.614E-06	3.562E-05	4.511E-03	2.293E+00	1.877E-03	4.679E-04
16 Public Class 6	Diesel	1.626E-04	1.033E-02	4.038E-04	2.539E-05	6.227E-03	2.646E-05	1.018E-04	1.905E-04	5.938E-03	6.614E-06	3.562E-05	1.018E-04	2.703E+00	7.550E-06	4.238E-04
16 Public Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.733E-03	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
16 Public Class 6	Natural Gas	2.717E-05	2.360E-04	6.777E-03	0.000E+00	3.444E-06	2.646E-05	1.018E-04	1.317E-04	3.166E-06	6.614E-06	3.562E-05	4.540E-03	2.260E+00	1.902E-03	4.607E-04
16 Public Class 7	Diesel	1.794E-04	1.172E-02	4.088E-04	2.590E-05	7.537E-03	2.646E-05	1.018E-04	2.036E-04	7.211E-03	6.614E-06	3.562E-05	1.144E-04	2.733E+00	8.333E-06	4.310E-04
16 Public Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.733E-03	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
16 Public Class 7	Natural Gas	2.752E-05	1.774E-04	6.752E-03	0.000E+00	3.746E-06	2.646E-05	1.018E-04	1.320E-04	3.444E-06	6.614E-06	3.562E-05	4.566E-03	2.261E+00	1.926E-03	4.609E-04
16 Utility Class 5	Diesel	1.721E-05	1.113E-03	1.199E-04	2.314E-05	6.938E-03	2.646E-05	1.003E-04	1.337E-04	6.288E-06	6.614E-06	3.511E-05	4.835E-03	2.444E+00	7.993E-07	3.850E-04
16 Utility Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.013E-05	7.661E-03	0.000E+00	6.614E-06	1.758E-05	2.417E-05	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 5	Natural Gas	2.184E-05	4.417E-04	6.759E-03	0.000E+00	1.923E-06	2.646E-05	1.003E-04	1.287E-04	1.776E-06	6.614E-06	3.511E-05	4.319E-03	2.178E+00	1.532E-03	4.436E-04
16 Utility Class 6	Diesel	1.536E-05	1.127E-03	1.127E-04	2.305E-05	6.651E-06	2.646E-05	1.003E-04	1.334E-04	6.364E-06	6.614E-06	3.511E-05	4.808E-03	2.434E+00	7.136E-07	3.833E-04
16 Utility Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.013E-05	7.661E-03	0.000E+00	6.614E-06	1.758E-05	2.417E-05	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 6	Natural Gas	2.189E-05	4.363E-04	6.727E-03	0.000E+00	1.949E-06	2.646E-05	1.003E-04	1.287E-04	1.792E-06	6.614E-06	3.511E-05	4.351E-03	2.169E+00	1.532E-03	4.436E-04
16 Utility Class 7	Diesel	1.268E-05	9.423E-04	1.007E-04	2.307E-05	5.958E-06	2.646E-05	1.003E-04	1.327E-04	5.700E-06	6.614E-06	3.511E-05	4.742E-03	2.346E+00	5.898E-07	3.838E-04
16 Utility Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.013E-05	7.661E-03	0.000E+00	6.614E-06	1.758E-05	2.417E-05	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 7	Natural Gas	2.168E-05	4.638E-04	6.290E-03	0.000E+00	1.814E-06	2.646E-05	1.003E-04	1.286E-04	1.670E-06	6.614E-06	3.511E-05	4.339E-03	2.171E+00	1.517E-03	4.426E-04
16TS	Gasoline	1.362E-04	8.658E-04	2.809E-03	3.788E-05	3.265E-06	2.646E-05	9.923E-03	1.290E-04	3.002E-06	6.614E-06	3.474E-06	4.633E-03	3.632E+00	2.793E-05	4.451E-05
16TS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.942E-05	7.608E-03	0.000E+00	6.614E-06	1.737E-05	2.398E-03	0.000E+00	0.000E+00	0.000E+00
17 CARP Class B	Diesel	2.841E-05	3.430E-03	1.293E-04	3.219E-05	7.204E-03	7.937E-05	1.634E-04	3.148E-04	6.892E-05	1.984E-03	5.718E-05	1.459E-04	3.400E+00	1.329E-06	3.554E-04
17 CARP Class B	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	8.148E-03	1.610E-04	0.000E+00	1.984E-03	2.819E-03	4.843E-03	0.000E+00	0.000E+00	0.000E+00
17 CARP Class B	Natural Gas	2.924E-05	4.803E-04	8.540E-03	0.000E+00	4.039E-06	7.937E-05	1.634E-04	2.468E-04	3.714E-06	1.984E-03	5.718E-05	8.073E-03	2.514E+00	2.047E-03	3.124E-04
17 HNOGS Class B	Diesel	2.728E-05	3.292E-03	1.133E-04	3.181E-05	6.821E-03	7.937E-05	1.634E-04	3.109E-04	6.536E-05	1.984E-03	5.718E-05	1.423E-04	3.359E+00	1.272E-06	5.292E-04
17 HNOGS Class B	Electricity	2.921E-05	3.501E-03	1.311E-04	3.197E-05	7.373E-03	7.937E-05	1.634E-04	3.145E-04	7.054E-05	1.984E-03	5.718E-05	1.474E-04	3.724E+00	1.337E-06	3.319E-04
17 Other Port Class B	Diesel	2.614E-05	3.689E-03	2.320E-04	3.472E-05	4.472E-03	7.937E-05	1.879E-04	3.120E-04	4.278E-05	1.984E-03	6.577E-05	1.284E-04	3.667E+00	1.215E-06	3.777E-04
17 Other Port Class B	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.396E-03	1.733E-04	0.000E+00	1.984E-03	3.289E-05	5.273E-03	0.000E+00	0.000E+00	0.000E+00
17 PDAK Class B	Diesel	2.714E-05	3.873E-03	2.232E-04	3.459E-05	4.454E-03	7.937E-05	1.879E-04	3.118E-04	4.261E-05	1.984E-03	6.577E-05	1.283E-04	3.633E+00	1.260E-06	3.753E-04
17 PDAK Class B	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.396E-03	1.733E-04	0.000E+00	1.984E-03	3.289E-05	5.273E-03	0.000E+00	0.000E+00	0.000E+00
17 PDAK Class B	Natural Gas	3.693E-05	3.804E-04	1.697E-02	0.000E+00	3.565E-06	7.937E-05	1.879E-04	2.728E-04	5.117E-06	1.984E-03	6.577E-05	9.073E-03	2.671E+00	2.586E-03	3.446E-04
17 Public Class B	Diesel	2.314E-04	1.687E-02	2.747E-04	3.897E-03	9.963E-03	7.937E-05	2.462E-04	4.253E-04	9.534E-03	1.984E-03	8.618E-06	2.014E-04	4.115E+00	1.073E-03	4.488E-04
17 Public Class B	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	1.083E-04	1.896E-04	0.000E+00	1.984E-03	3.797E-05	5.781E-03	0.000E+00	0.000E+00	0.000E+00
17 Public Class B	Natural Gas	3.573E-05	1.142E-03	2.071E-02	0.000E+00	6.309E-06	7.937E-05	2.264E-04	3.121E-04	5.801E-06	1.984E-03	7.924E-05	1.049E-04	3.494E+00	3.902E-03	7.123E-04
17 Single Concrete/Trasport Mix C10	Diesel	1.893E-05	2.156E-03	1.200E-04	3.448E-05	3.298E-03	7.937E-05	1.772E-04	2.893E-04	3.153E-03	1.984E-03	6.200E-05	1.134E-04	3.642E+00	8.802E-07	6.738E-04
17 Single Concrete/Trasport Mix C10	Electricity	0.000E+00	0.000E+00	0.00												

UBUS	Natural Gas	1.292E-04	1.222E-04	1.025E-01	0.000E+00	6.275E-07	6.826E-05	2.425E-04	3.114E-04	6.003E-07	1.707E-05	8.488E-05	1.025E-04	2.784E+00	9.040E-03	5.673E-04	
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Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region: San Mateo

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC202x Categori

Units: miles/day for CVMT and EVMT, trips/

		MTons/Mile										CO2(miles)*					
												AACCL_Rate					
Vehicle Category	Fuel	BOG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_RUNEX	PM10_PMTW	PM10_PMBW	PM10_Total	X	W	W	W	PM2.5_Total	X	CH4_RUNEX	N2O_RUNEX
All Other Buses	Diesel	2.092E-08	7.051E-07	9.672E-08	1.104E-08	7.002E-09	1.200E-08	4.614E-08	6.314E-08	6.699E-09	3.000E-09	1.613E-08	2.283E-08	1.166E-03	9.718E-10	1.837E-07	
All Other Buses	Natural Gas	1.124E-08	1.964E-07	3.245E-06	0.000E+00	1.121E-09	1.200E-08	4.614E-08	5.926E-08	1.031E-09	3.000E-09	1.613E-08	2.018E-08	1.012E-03	7.864E-07	2.064E-07	
All Other Buses	Gasoline	7.847E-09	3.809E-08	6.378E-07	2.679E-09	1.263E-09	8.000E-09	6.709E-09	1.997E-08	1.162E-09	2.000E-09	2.348E-09	5.510E-09	2.710E-04	2.038E-09	4.234E-09	
LD#	Diesel	2.270E-08	1.886E-07	3.041E-07	2.200E-09	1.328E-08	8.000E-09	6.869E-09	2.813E-08	1.271E-08	2.000E-09	2.404E-09	1.711E-08	2.322E-04	1.034E-09	3.659E-08	
LD#	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.371E-09	1.397E-08	0.000E+00	2.000E-09	1.350E-09	3.330E-09	0.000E+00	0.000E+00	0.000E+00	
LD#	Plug-in Hybrid	1.313E-09	3.125E-09	1.961E-07	1.298E-09	6.280E-10	8.000E-09	3.783E-09	1.241E-08	5.775E-10	2.000E-09	1.324E-09	3.902E-09	1.313E-04	4.025E-10	5.344E-10	
LD1	Gasoline	2.094E-08	1.012E-07	1.079E-06	3.139E-09	1.665E-09	8.000E-09	8.064E-09	1.773E-08	1.531E-09	2.000E-09	2.823E-09	6.354E-09	3.175E-04	4.741E-09	7.633E-09	
LD1	Diesel	3.134E-07	1.654E-06	1.648E-06	3.955E-09	2.472E-07	8.000E-09	9.495E-09	2.447E-07	2.345E-07	2.000E-09	3.323E-09	2.418E-07	4.744E-04	1.456E-08	6.574E-08	
LD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.381E-09	1.238E-08	0.000E+00	2.000E-09	1.533E-09	3.533E-09	0.000E+00	0.000E+00	0.000E+00	
LD1	Plug-in Hybrid	1.206E-09	2.849E-09	1.801E-07	1.192E-09	3.961E-10	8.000E-09	3.823E-09	1.222E-08	3.642E-10	2.000E-09	1.338E-09	3.702E-09	1.205E-04	3.694E-10	4.909E-10	
LD2	Gasoline	8.159E-09	4.734E-08	6.508E-07	3.227E-09	1.256E-09	8.000E-09	7.748E-09	1.702E-08	1.158E-09	2.000E-09	2.719E-09	5.874E-09	3.044E-04	2.154E-09	4.413E-09	
LD2	Diesel	1.255E-08	3.960E-08	1.194E-07	2.874E-09	4.730E-09	8.000E-09	7.835E-09	2.056E-08	4.525E-09	2.000E-09	2.742E-09	9.267E-09	3.033E-04	5.829E-10	4.779E-08	
LD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.358E-09	1.236E-08	0.000E+00	2.000E-09	1.523E-09	3.525E-09	0.000E+00	0.000E+00	0.000E+00	
LD2	Plug-in Hybrid	1.257E-09	2.991E-09	1.878E-07	1.244E-09	4.843E-10	8.000E-09	3.803E-09	1.229E-08	4.433E-10	2.000E-09	1.331E-09	3.776E-09	1.257E-04	3.854E-10	5.118E-10	
HD1	Gasoline	2.703E-08	1.081E-07	9.324E-07	8.273E-09	1.002E-09	8.000E-09	7.800E-08	8.250E-08	1.381E-09	2.000E-09	2.730E-08	3.048E-08	8.349E-04	5.557E-09	6.187E-09	
HD1	Diesel	1.222E-07	1.028E-06	3.315E-07	5.924E-09	2.558E-08	1.200E-08	7.800E-08	1.156E-07	2.447E-08	2.000E-09	2.730E-08	5.477E-08	6.252E-04	6.142E-09	8.850E-08	
HD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	3.900E-08	4.700E-08	0.000E+00	2.000E-09	1.363E-08	1.565E-08	0.000E+00	0.000E+00	0.000E+00	
HD2	Gasoline	2.185E-08	1.222E-07	8.142E-07	9.338E-09	1.452E-09	8.000E-09	9.100E-08	1.004E-07	1.317E-09	2.000E-09	3.183E-08	3.517E-08	9.445E-04	4.775E-09	7.271E-09	
HD2	Diesel	1.238E-07	7.588E-07	2.809E-07	7.001E-09	2.290E-08	1.200E-08	9.100E-08	1.259E-07	2.191E-08	2.000E-09	3.183E-08	5.676E-08	7.389E-04	5.750E-09	1.164E-07	
HD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.550E-08	5.350E-08	0.000E+00	2.000E-09	1.593E-08	1.793E-08	0.000E+00	0.000E+00	0.000E+00	
HCY	Gasoline	5.304E-07	5.188E-07	1.105E-05	1.848E-09	2.012E-09	4.000E-09	1.200E-08	1.801E-08	1.881E-08	1.000E-09	4.200E-09	7.081E-09	1.669E-04	1.452E-07	1.697E-08	
HCY	Diesel	9.074E-09	3.843E-08	4.862E-07	3.891E-09	1.258E-09	8.000E-09	7.819E-09	1.708E-08	1.156E-09	2.000E-09	2.737E-09	5.893E-09	3.936E-04	2.492E-09	5.161E-09	
MDV	Gasoline	9.074E-09	3.726E-08	1.271E-07	3.774E-09	4.182E-09	8.000E-09	7.994E-09	2.018E-08	4.001E-09	2.000E-09	2.798E-09	8.800E-09	3.983E-04	4.215E-10	6.273E-08	
MDV	Diesel	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.337E-09	1.236E-08	0.000E+00	2.000E-09	1.525E-09	3.525E-09	0.000E+00	0.000E+00	0.000E+00	
MDV	Plug-in Hybrid	1.270E-09	3.021E-09	1.894E-07	1.255E-09	5.525E-10	8.000E-09	3.800E-09	1.235E-08	5.086E-10	2.000E-09	1.330E-09	3.839E-09	1.249E-04	3.906E-10	5.205E-10	
MI	Gasoline	4.609E-08	3.141E-07	1.138E-06	1.924E-08	1.748E-09	1.200E-08	4.502E-08	5.879E-08	1.624E-09	2.000E-09	1.576E-08	2.038E-08	1.947E-03	1.173E-08	3.113E-08	
MI	Diesel	7.094E-08	3.096E-06	2.844E-07	1.029E-08	1.182E-08	1.600E-08	4.479E-08	1.746E-07	4.958E-08	4.000E-09	1.567E-08	4.925E-08	1.084E-03	4.223E-09	1.711E-07	
Motor Coach	Diesel	1.483E-08	1.735E-06	7.442E-08	1.678E-08	3.030E-08	1.200E-08	7.410E-08	1.164E-07	2.899E-08	2.000E-09	2.593E-08	5.793E-08	1.772E-03	6.886E-10	2.792E-07	
ORIS	Gasoline	3.934E-08	2.767E-07	8.478E-07	1.703E-08	1.110E-09	1.200E-08	4.480E-08	5.791E-08	1.020E-09	2.000E-09	1.568E-08	1.970E-08	1.723E-03	8.478E-09	1.601E-08	
ORIS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.240E-08	3.440E-08	0.000E+00	2.000E-09	7.840E-09	1.084E-08	0.000E+00	0.000E+00	0.000E+00	
PTD	Diesel	2.297E-08	3.103E-06	2.614E-07	9.744E-08	4.038E-09	0.000E+00	0.000E+00	5.038E-09	4.820E-09	0.000E+00	0.000E+00	4.820E-09	2.984E-03	1.047E-09	3.287E-07	
PTD	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
SRIS	Gasoline	9.611E-08	8.323E-07	2.460E-06	7.804E-09	1.232E-09	8.000E-09	4.492E-08	5.417E-08	1.132E-09	2.000E-09	1.572E-08	1.887E-08	7.894E-04	1.963E-08	3.914E-08	
SRIS	Diesel	4.790E-08	4.497E-06	2.024E-07	1.084E-08	2.342E-08	1.200E-08	4.492E-08	8.034E-08	2.241E-08	1.000E-09	1.572E-08	4.113E-08	1.144E-03	3.112E-09	1.803E-07	
SRIS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.214E-09	2.246E-08	3.167E-08	0.000E+00	2.000E-09	7.860E-09	1.016E-08	0.000E+00	0.000E+00	0.000E+00	
SRIS	Natural Gas	4.787E-08	3.352E-07	1.124E-05	0.000E+00	3.674E-09	1.200E-08	4.492E-08	6.059E-08	3.378E-09	2.000E-09	1.572E-08	2.210E-08	1.247E-03	3.350E-06	2.543E-07	
TS CARP Class 4	Diesel	1.025E-08	4.233E-07	4.012E-08	1.070E-08	1.663E-09	1.200E-08	4.231E-08	6.998E-08	8.187E-09	2.000E-09	1.481E-08	2.610E-08	1.330E-03	4.762E-10	7.780E-07	
TS CARP Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	2.000E-09	7.405E-09	1.040E-08	0.000E+00	0.000E+00	0.000E+00	
TS CARP Class 5	Diesel	7.110E-09	3.977E-07	3.278E-08	1.070E-08	7.017E-09	1.200E-08	4.231E-08	6.133E-08	6.713E-09	2.000E-09	1.481E-08	2.452E-08	1.130E-03	3.302E-10	1.780E-07	
TS CARP Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	2.000E-09	7.405E-09	1.040E-08	0.000E+00	0.000E+00	0.000E+00	
TS CARP Class 6	Diesel	8.313E-09	3.628E-07	3.474E-08	1.052E-08	7.464E-09	1.200E-08	4.231E-08	6.178E-08	7.141E-09	2.000E-09	1.481E-08	2.495E-08	1.111E-03	3.861E-10	1.750E-07	
TS CARP Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	2.000E-09	7.405E-09	1.040E-08	0.000E+00	0.000E+00	0.000E+00	
TS CARP Class 7	Diesel	6.407E-09	4.158E-07	3.270E-08	9.900E-09	6.999E-09	1.200E-08	4.231E-08	6.313E-08	6.999E-09	2.000E-09	1.481E-08	2.451E-08	1.043E-03	2.976E-10	1.647E-07	
TS CARP Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	2.000E-09	7.405E-09	1.040E-08	0.000E+00	0.000E+00	0.000E+00	
TS Instate Delivery Class 4	Diesel	9.887E-08	1.825E-06	3.075E-07	1.118E-08	3.938E-08	1.200E-08	4.756E-08	9.895E-08	3.768E-08	2.000E-09	1.665E-08	2.733E-08	1.181E-03	4.592E-09	1.860E-07	
TS Instate Delivery Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.378E-08	3.578E-08	0.000E+00	2.000E-09	8.324E-09	1.132E-08	0.000E+00	0.000E+00	0.000E+00	
TS Instate Delivery Class 4	Natural Gas	1.219E-08	9.235E-08	3.741E-06	0.000E+00	1.830E-09	1.200E-08	4.756E-08	6.195E-08	1.882E-09	2.000E-09	1.665E-08	2.133E-08	1.050E-03	8.332E-07	2.141E-07	
TS Instate Delivery Class 5	Diesel	2.652E-08	9.055E-07	1.159E-07	1.115E-08	1.064E-08	1.200E-08	4.756E-08	7.020E-08	1.018E-08	2.000E-09	1.665E-08	2.982E-08	1.177E-03	1.232E-08	1.853E-07	
TS Instate Delivery Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.378E-08	3.578E-08	0.000E+00	2.000E-09	8.324E-09	1.132E-08	0.000E+00	0.000E+00	0.000E+00	
TS Instate Delivery Class 5	Natural Gas	1.196E-08	1.187E-07	3.677E-06	0.000E+00	1.478E-09	1.200E-08	4.756E-08	6.144E-08	1.442E-09	2.000E-09	1.665E-08	2.119E-08	1.042E-03	8.370E-07	2.124E-07	
TS Instate Delivery Class 6	Diesel	4.312E-08	1.005E-07	1.070E-07	1.118E-08	3.938E-08	1.200E-08	4.756E-08	9.								

16 Institute Other Class 6	Diesel	3.426E-08	1.028E-06	1.247E-07	1.078E-08	1.731E-08	1.200E-08	4.486E-08	7.440E-08	1.678E-08	3.000E-09	1.570E-08	3.548E-08	1.138E-03	1.591E-09	1.793E-07
16 Institute Other Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.243E-08	3.443E-08	0.000E+00	3.000E-09	7.81E-09	1.085E-08	0.000E+00	0.000E+00	0.000E+00
16 Institute Other Class 6	Natural Gas	9.306E-09	1.097E-07	2.724E-06	0.000E+00	1.212E-09	1.200E-08	4.486E-08	5.808E-08	1.115E-09	3.000E-09	1.570E-08	1.992E-08	9.219E-04	6.513E-07	1.879E-07
16 Institute Other Class 7	Diesel	1.171E-08	8.966E-07	7.215E-08	1.058E-08	6.134E-09	1.200E-08	4.486E-08	6.300E-08	5.869E-09	3.000E-09	1.570E-08	2.437E-08	1.118E-03	5.440E-10	1.761E-07
16 Institute Other Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.243E-08	3.443E-08	0.000E+00	3.000E-09	7.81E-09	1.085E-08	0.000E+00	0.000E+00	0.000E+00
16 Institute Other Class 7	Natural Gas	8.779E-09	1.613E-07	2.801E-06	0.000E+00	9.144E-10	1.200E-08	4.486E-08	5.778E-08	8.408E-10	3.000E-09	1.570E-08	1.954E-08	9.288E-04	6.110E-07	1.895E-07
16 Institute Tractor Class 6	Diesel	4.146E-08	9.226E-07	1.350E-07	1.112E-08	1.826E-08	1.200E-08	4.486E-08	7.212E-08	1.747E-08	3.000E-09	1.570E-08	3.617E-08	1.174E-03	1.926E-09	1.850E-07
16 Institute Tractor Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.243E-08	3.443E-08	0.000E+00	3.000E-09	7.81E-09	1.085E-08	0.000E+00	0.000E+00	0.000E+00
16 Institute Tractor Class 6	Natural Gas	8.158E-09	1.270E-07	2.756E-06	0.000E+00	1.135E-09	1.200E-08	4.486E-08	5.800E-08	1.043E-09	3.000E-09	1.570E-08	1.975E-08	8.939E-04	6.409E-07	1.831E-07
16 Institute Tractor Class 7	Diesel	1.041E-08	1.007E-06	7.470E-08	1.009E-08	6.026E-09	1.200E-08	4.486E-08	6.389E-08	5.765E-09	3.000E-09	1.570E-08	2.447E-08	1.066E-03	4.835E-10	1.679E-07
16 Institute Tractor Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.243E-08	3.443E-08	0.000E+00	3.000E-09	7.81E-09	1.085E-08	0.000E+00	0.000E+00	0.000E+00
16 Institute Tractor Class 7	Natural Gas	8.583E-09	1.713E-07	2.801E-06	0.000E+00	6.360E-10	1.200E-08	4.486E-08	5.770E-08	7.607E-10	3.000E-09	1.570E-08	1.947E-08	9.267E-04	6.007E-07	1.886E-07
16 OOS Class 4	Diesel	1.347E-08	5.035E-07	4.790E-08	1.064E-08	1.040E-08	1.200E-08	4.231E-08	6.472E-08	9.931E-09	3.000E-09	1.481E-08	2.776E-08	1.124E-03	6.255E-10	1.771E-07
16 OOS Class 5	Diesel	7.784E-09	4.119E-07	3.429E-08	1.065E-08	7.335E-09	1.200E-08	4.231E-08	6.165E-08	7.018E-09	3.000E-09	1.481E-08	2.483E-08	1.125E-03	3.616E-10	1.772E-07
16 OOS Class 6	Diesel	1.050E-08	4.134E-07	4.029E-08	1.044E-08	8.669E-09	1.200E-08	4.231E-08	6.998E-08	8.294E-09	3.000E-09	1.481E-08	2.610E-08	1.102E-03	4.879E-10	1.738E-07
16 OOS Class 7	Diesel	6.390E-09	4.270E-07	3.286E-08	8.833E-09	7.048E-09	1.200E-08	4.231E-08	6.136E-08	6.743E-09	3.000E-09	1.481E-08	2.455E-08	1.038E-03	2.968E-10	1.636E-07
16 Public Class 4	Diesel	7.502E-08	5.124E-06	1.815E-07	1.173E-08	2.336E-08	1.200E-08	4.617E-08	8.353E-08	2.426E-08	3.000E-09	1.616E-08	4.342E-08	1.239E-03	3.484E-09	1.932E-07
16 Public Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.108E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
16 Public Class 4	Natural Gas	1.248E-08	8.072E-08	3.035E-06	0.000E+00	1.487E-09	1.200E-08	4.617E-08	5.986E-08	1.551E-09	3.000E-09	1.616E-08	2.071E-08	1.025E-03	8.737E-07	2.091E-07
16 Public Class 5	Diesel	4.317E-08	2.453E-06	1.322E-07	1.142E-08	1.193E-08	1.200E-08	4.617E-08	7.010E-08	1.141E-08	3.000E-09	1.616E-08	3.057E-08	1.204E-03	2.005E-09	1.906E-07
16 Public Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.108E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
16 Public Class 5	Natural Gas	1.216E-08	1.338E-07	3.094E-06	0.000E+00	1.435E-09	1.200E-08	4.617E-08	5.950E-08	1.319E-09	3.000E-09	1.616E-08	2.048E-08	1.041E-03	8.513E-07	2.125E-07
16 Public Class 6	Diesel	7.737E-08	4.693E-06	1.831E-07	1.161E-08	2.823E-08	1.200E-08	4.617E-08	8.642E-08	2.702E-08	3.000E-09	1.616E-08	4.618E-08	1.226E-03	3.425E-09	1.932E-07
16 Public Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.108E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
16 Public Class 6	Natural Gas	1.232E-08	1.070E-07	3.074E-06	0.000E+00	1.362E-09	1.200E-08	4.617E-08	5.973E-08	1.436E-09	3.000E-09	1.616E-08	2.060E-08	1.026E-03	8.626E-07	2.090E-07
16 Public Class 7	Diesel	8.140E-08	5.316E-06	1.854E-07	1.175E-08	3.419E-08	1.200E-08	4.617E-08	9.236E-08	3.271E-08	3.000E-09	1.616E-08	5.187E-08	1.241E-03	3.781E-09	1.955E-07
16 Public Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.108E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
16 Public Class 7	Natural Gas	1.250E-08	7.818E-08	3.092E-06	0.000E+00	1.499E-09	1.200E-08	4.617E-08	5.987E-08	1.562E-09	3.000E-09	1.616E-08	2.075E-08	1.036E-03	8.748E-07	2.111E-07
16 Utility Class 5	Diesel	7.806E-09	5.048E-07	5.119E-08	1.050E-08	5.142E-09	1.200E-08	4.550E-08	6.064E-08	3.006E-09	3.000E-09	1.592E-08	2.193E-08	1.108E-03	3.626E-10	1.746E-07
16 Utility Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.275E-08	3.475E-08	0.000E+00	3.000E-09	7.962E-09	1.096E-08	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 5	Natural Gas	8.918E-09	2.004E-07	2.846E-06	0.000E+00	6.761E-10	1.200E-08	4.549E-08	5.837E-08	8.066E-10	3.000E-09	1.592E-08	1.973E-08	9.886E-04	6.461E-07	2.018E-07
16 Utility Class 6	Diesel	6.949E-09	5.114E-07	5.110E-08	1.046E-08	5.017E-09	1.200E-08	4.550E-08	6.051E-08	2.887E-09	3.000E-09	1.592E-08	2.181E-08	1.104E-03	3.237E-10	1.740E-07
16 Utility Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.275E-08	3.475E-08	0.000E+00	3.000E-09	7.962E-09	1.096E-08	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 6	Natural Gas	9.911E-09	1.988E-07	2.845E-06	0.000E+00	8.842E-10	1.200E-08	4.550E-08	5.838E-08	8.136E-10	3.000E-09	1.592E-08	1.974E-08	9.797E-04	6.956E-07	1.997E-07
16 Utility Class 7	Diesel	5.752E-09	4.278E-07	4.549E-08	1.046E-08	2.702E-09	1.200E-08	4.550E-08	6.006E-08	2.885E-09	3.000E-09	1.592E-08	2.151E-08	1.106E-03	2.675E-10	1.741E-07
16 Utility Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.275E-08	3.475E-08	0.000E+00	3.000E-09	7.962E-09	1.096E-08	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 7	Natural Gas	9.834E-09	2.104E-07	2.853E-06	0.000E+00	8.240E-10	1.200E-08	4.550E-08	5.832E-08	7.576E-10	3.000E-09	1.592E-08	1.968E-08	9.848E-04	6.883E-07	2.007E-07
16T5	Gasoline	6.177E-08	3.927E-07	1.274E-06	1.718E-08	1.481E-09	1.200E-08	4.502E-08	5.850E-08	1.362E-09	3.000E-09	1.574E-08	2.017E-08	1.286E-03	1.207E-08	2.019E-08
16T5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.231E-08	3.451E-08	0.000E+00	3.000E-09	7.878E-09	1.088E-08	0.000E+00	0.000E+00	0.000E+00
17 CARP Class B	Diesel	1.298E-08	1.556E-06	5.872E-08	1.460E-08	3.368E-08	3.600E-08	7.410E-08	1.428E-07	3.126E-08	9.000E-09	2.593E-08	6.620E-08	1.542E-03	6.027E-10	2.429E-07
17 CARP Class B	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E+00	3.703E-08	7.305E-08	0.000E+00	9.000E-09	2.597E-08	2.197E-08	0.000E+00	0.000E+00	0.000E+00
17 CARP Class B	Natural Gas	1.326E-08	2.178E-07	3.874E-06	0.000E+00	1.832E-09	3.600E-08	7.410E-08	1.119E-07	1.684E-09	9.000E-09	2.593E-08	3.662E-08	1.406E-03	9.284E-07	2.324E-07
17HNOOS Class B	Diesel	1.342E-08	1.493E-06	5.141E-08	1.443E-08	3.094E-08	3.600E-08	7.410E-08	1.410E-07	2.960E-08	9.000E-09	2.593E-08	6.453E-08	1.524E-03	5.769E-10	2.401E-07
17HNOOS Class B	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E+00	7.410E-08	1.435E-07	3.200E-08	9.000E-09	2.593E-08	6.493E-08	1.525E-03	6.153E-10	2.413E-07
17 Other Port Class B	Diesel	1.187E-08	1.673E-06	1.052E-07	1.575E-08	2.028E-08	3.600E-08	8.524E-08	1.415E-07	1.941E-08	9.000E-09	2.593E-08	5.824E-08	1.643E-03	5.512E-10	2.620E-07
17 Other Port Class B	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E+00	4.262E-08	7.862E-08	0.000E+00	9.000E-09	1.492E-08	2.392E-08	0.000E+00	0.000E+00	0.000E+00
17 PDAK Class B	Diesel	1.231E-08	1.275E-06	1.103E-07	1.549E-08	1.020E-08	3.600E-08	8.524E-08	1.414E-07	1.933E-08	9.000E-09	2.593E-08	5.816E-08	1.637E-03	5.717E-10	2.610E-07
17 PDAK Class B	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E+00	4.262E-08	7.862E-08	0.000E+00	9.000E-09	1.492E-08	2.392E-08	0.000E+00	0.000E+00	0.000E+00
17 PDAK Class B	Natural Gas	1.676E-08	1.725E-07	4.977E-06	0.000E+00	2.524E-09	3.600E-08	8.524E-08	1.238E-07	2.321E-09	9.000E-09	2.593E-08	4.115E-08	1.212E-03	1.173E-06	2.470E-07
17 Public Class B	Diesel	1.049E-07	7.606E-06	3.523E-07	1.768E-08	4.520E-08	3.600E-08	1.117E-07	1.299E-07	4.226E-08	9.000E-09	3.909E-08	9.134E-08	1.867E-03	4.875E-09	1.741E-07
17 Public Class B	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E+00	4.921E-08	8.521E-08	0.000E+00	9.000E-09	1.722E-08	2.422E-08	0.000E+00	0.000E+00	0.000E+00
17 Public Class B	Natural Gas	2.529E-08	5.179E-07	9.355E-06	0.000E+00	2.862E-09	3.600E-08	1.027E-07	1.416E-07	2.631E-09	9.000E-09	2.594E-08	4.757E-08	1.885E-03	1.770E-06	3.221E-07
17 Single Concrete/Transit Mix CB	Diesel	8.596E-09	9.788E-07	5.443E-08	3.044E-08	4.966E-08	3.600E-08	8.035E-08	1.315E-07	1.431E-08	9.000E-09	2.812E-08	5.144E-08	1.652E-03	3.993E-10	2.603E-07
17 Single Concrete/Trans																

UBUS	Natural Gas	5.859E-08	5.542E-08	4.651E-05	0.000E+00	2.846E-10	3.096E-08	1.100E-07	1.412E-07	2.723E-10	7.741E-09	3.850E-08	4.651E-08	1.263E-03	4.101E-06	2.574E-07
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2.205E-03

[illegible]

16 Insitu Other Class 6	Natural Gas	0.00996074	0.03219138	2.67188919	0	0.00155542	0.012	0.04486375	5.84E-02	0.00143013	0.003	0.01570231	2.01E-02	877.304902	0.6971391	0.17884434	246	0.001%
16 Insitu Other Class 7	Electricity	0.00725474	0.44489093	0.02357509	0.00973444	0.00398851	0.013	0.04486375	5.85E-02	0.00381937	0.003	0.01570231	2.35E-02	1027.9894	0.00033364	0.18198013	10,793	0.054%
16 Insitu Other Class 7	Electricity	0	0	0	0	0	0.012	0.02243187	3.44E-02	0	0.003	0.00783114	1.09E-02	0	0	0	7,722	0.039%
16 Insitu Other Class 7	Natural Gas	0.00952218	0.09190463	3.71845936	0	0.00132725	0.012	0.04486375	5.82E-02	0.00122035	0.003	0.01570231	1.99E-02	895.033435	0.66644452	0.18245842	230	0.001%
16 Insitu Tractor Class 6	Electricity	0.00537021	0.25825315	0.04130506	0.00964309	0.00307233	0.012	0.04486375	5.99E-02	0.00293942	0.003	0.01570231	2.18E-02	1018.34237	0.00024942	0.18646426	349	0.002%
16 Insitu Tractor Class 6	Electricity	0	0	0	0	0	0.012	0.02243187	3.44E-02	0	0.003	0.00785116	1.09E-02	0	0	0	413	0.002%
16 Insitu Tractor Class 6	Natural Gas	0.00995888	0.03238107	2.67206253	0	0.00155429	0.012	0.04486375	5.84E-02	0.00142911	0.003	0.01570231	2.01E-02	876.707281	0.69698809	0.17872251	3	0.000%
16 Insitu Tractor Class 7	Electricity	0.00867777	0.46252307	0.05242877	0.00887055	0.00374522	0.012	0.04486375	6.08E-02	0.00377458	0.003	0.01570231	2.35E-02	936.759107	0.00031742	0.14758678	4,393	0.022%
16 Insitu Tractor Class 7	Electricity	0	0	0	0	0	0.012	0.02243187	3.44E-02	0	0.003	0.00785116	1.09E-02	0	0	0	977	0.005%
16 Insitu Tractor Class 7	Natural Gas	0.00957365	0.0868178	2.70880961	0	0.00133534	0.012	0.04486375	5.82E-02	0.00124444	0.003	0.01570231	1.99E-02	873.706489	0.67004692	0.17811078	83	0.000%
16 OGS Class 4	Electricity	0.00523573	0.25084003	0.02681674	0.00970667	0.00358472	0.012	0.04231382	3.99E-02	0.00532244	0.003	0.01480984	2.31E-02	933.458232	0.00024319	0.13018427	104	0.001%
16 OGS Class 5	Electricity	0.00523717	0.23232065	0.02699007	0.00903367	0.00358455	0.013	0.04231382	3.99E-02	0.00534296	0.003	0.01480984	2.32E-02	933.984838	0.00024418	0.13030007	143	0.001%
16 OGS Class 6	Electricity	0.00520914	0.21828244	0.02670662	0.00900788	0.00354059	0.012	0.04231382	3.99E-02	0.00530091	0.003	0.01480984	2.31E-02	931.261632	0.00024193	0.14987166	373	0.002%
16 OGS Class 7	Electricity	0.00562184	0.25072072	0.0228923	0.00811812	0.00387238	0.012	0.04231382	6.02E-02	0.00561834	0.003	0.01480984	2.44E-02	857.230778	0.00026112	0.13207124	2,709	0.014%
16 Public Class 4	Electricity	0.01496285	0.23202401	0.03036439	0.01036438	0.00429717	0.013	0.04614939	6.27E-02	0.00433234	0.003	0.01613929	2.33E-02	1094.2331	0.00049591	0.17244418	664	0.003%
16 Public Class 4	Electricity	0	0	0	0	0	0.012	0.0230847	3.51E-02	0	0.003	0.00807964	1.11E-02	0	0	0	993	0.003%
16 Public Class 4	Natural Gas	0.01260624	0.06060388	3.05733327	0	0.00178258	0.012	0.04614939	6.08E-02	0.0016391	0.003	0.01613929	2.08E-02	983.770232	0.88229417	0.200548	47	0.000%
16 Public Class 5	Electricity	0.01323246	0.3588714	0.06133331	0.01037656	0.00396478	0.013	0.04614939	6.21E-02	0.00377603	0.003	0.01613929	2.39E-02	1095.76763	0.00041461	0.17263864	2,398	0.015%
16 Public Class 5	Electricity	0	0	0	0	0	0.012	0.0230847	3.51E-02	0	0.003	0.00807964	1.11E-02	0	0	0	2,041	0.010%
16 Public Class 5	Natural Gas	0.01260139	0.077971033	3.06443449	0	0.00179041	0.012	0.04614939	5.99E-02	0.00156346	0.003	0.01613929	2.07E-02	993.883701	0.87490958	0.20260949	184	0.001%
16 Public Class 6	Electricity	0.01284233	0.47152916	0.05977466	0.01034237	0.00396411	0.013	0.04614939	6.21E-02	0.0037726	0.003	0.01613929	2.39E-02	1092.18863	0.00039549	0.17207477	1,341	0.007%
16 Public Class 6	Electricity	0	0	0	0	0	0.012	0.0230847	3.51E-02	0	0.003	0.00807964	1.11E-02	0	0	0	1,184	0.006%
16 Public Class 6	Natural Gas	0.01237476	0.06383331	3.06073942	0	0.00173781	0.012	0.04614939	5.99E-02	0.00161624	0.003	0.01613929	2.08E-02	984.202643	0.88020084	0.20063615	97	0.000%
16 Public Class 7	Electricity	0.01084328	0.46339637	0.05339613	0.01021378	0.00350453	0.013	0.04614939	6.17E-02	0.00333292	0.003	0.01613929	2.33E-02	1078.50363	0.00030334	0.16991869	4,018	0.009%
16 Public Class 7	Electricity	0	0	0	0	0	0.012	0.0230847	3.51E-02	0	0.003	0.00807964	1.11E-02	0	0	0	2,899	0.015%
16 Public Class 7	Natural Gas	0.01229934	0.06176807	3.05888107	0	0.00177714	0.012	0.04614939	5.99E-02	0.00163401	0.003	0.01613929	2.08E-02	988.341442	0.8818114	0.20147987	307	0.002%
16 Utility Class 5	Electricity	0.00510252	0.19303174	0.03363355	0.00963378	0.00333076	0.013	0.0454967	5.98E-02	0.00222036	0.003	0.01592385	2.11E-02	1017.3528	0.00023302	0.1602684	151	0.001%
16 Utility Class 5	Electricity	0	0	0	0	0	0.012	0.02274835	3.47E-02	0	0.003	0.00796192	1.10E-02	0	0	0	215	0.001%
16 Utility Class 5	Natural Gas	0.01113687	0.05410456	2.74533962	0	0.00163663	0.012	0.0454967	5.91E-02	0.00150452	0.003	0.01592385	2.04E-02	915.657521	0.77945454	0.18666278	1	0.000%
16 Utility Class 6	Electricity	0.00510387	0.18876773	0.03364547	0.00963338	0.00329337	0.012	0.0454967	5.98E-02	0.00222062	0.003	0.01592385	2.11E-02	1017.30574	0.00023706	0.16027042	99	0.000%
16 Utility Class 6	Electricity	0	0	0	0	0	0.012	0.02274835	3.47E-02	0	0.003	0.00796192	1.10E-02	0	0	0	41	0.000%
16 Utility Class 6	Natural Gas	0.01113687	0.05410456	2.74533962	0	0.00163663	0.012	0.0454967	5.91E-02	0.00150452	0.003	0.01592385	2.04E-02	915.672701	0.77945454	0.18666587	0	0.000%
16 Utility Class 7	Electricity	0.00505398	0.18395083	0.03329418	0.00963926	0.00329366	0.012	0.0454967	5.98E-02	0.00219168	0.003	0.01592385	2.11E-02	1017.9380	0.00023747	0.16027045	99	0.000%
16 Utility Class 7	Electricity	0	0	0	0	0	0.012	0.02274835	3.47E-02	0	0.003	0.00796192	1.10E-02	0	0	0	57	0.000%
16 Utility Class 7	Natural Gas	0.01113687	0.05410456	2.74533962	0	0.00163663	0.012	0.0454967	5.91E-02	0.00150452	0.003	0.01592385	2.04E-02	915.676716	0.77945454	0.18666669	0	0.000%
16T5	Gasoline	0.01084629	0.06843498	0.18015945	0.01494903	0	0.013	0.04501744	5.85E-02	0.00137553	0.003	0.013756	2.01E-02	1338.31927	0.00286964	0.00666023	28,077	0.141%
16T5	Electricity	0	0	0	0	0	0.012	0.02250872	3.45E-02	0	0.003	0.00787905	1.09E-02	0	0	0	32,146	0.162%
17 CARP Class 8	Electricity	0.01142943	1.1999551	0.03867049	0.01210767	0.02970522	0.03600001	0.08183622	1.48E-01	0.02842019	0.009	0.02842019	6.61E-02	1278.60938	0.00033087	0.20144546	20,863	0.105%
17 CARP Class 8	Electricity	0	0	0	0	0	0.03600001	0.04094853	7.67E-02	0	0.009	0.01433139	2.33E-02	0	0	0	5,167	0.026%
17 CARP Class 8	Natural Gas	0.01336263	0.15273777	2.88343058	0	0.00196632	0.03600001	0.08182984	1.20E-01	0.00180787	0.009	0.02842019	3.94E-02	1022.83993	0.93323393	0.20851179	38	0.000%
17 NHOOS Class 8	Electricity	0.0311129	1.23205533	0.03762449	0.01159414	0.02931603	0.03600001	0.08186321	1.47E-01	0.02864783	0.009	0.02863812	6.37E-02	1224.37921	0.00031617	0.19290144	31,923	0.161%
17 NHOOS Class 8	Electricity	0.01148334	1.36293278	0.03878213	0.01188485	0.03103313	0.03600001	0.08186437	1.49E-01	0.02969726	0.009	0.02845211	6.73E-02	1223.69952	0.00032345	0.19278018	1,600	0.008%
17 Other Part Class 8	Electricity	0.01053334	1.2309861	0.03648314	0.01296662	0.031442434	0.03600001	0.09411738	1.47E-01	0.01571383	0.009	0.03293508	5.77E-02	1371.49993	0.00046603	0.21266914	1,988	0.010%
17 Other Part Class 8	Electricity	0	0	0	0	0	0.03600001	0.04707849	8.31E-02	0	0.009	0.01647754	2.53E-02	0	0	0	302	0.003%
17 FDMK Class 8	Electricity	0.01023326	1.27979048	0.06473946	0.01294383	0.0171246	0.03600001	0.09413738	1.47E-01	0.01639337	0.009	0.03293508	5.83E-02	1366.8896	0.0004754	0.21333405	6,177	0.033%
17 FDMK Class 8	Electricity	0	0	0	0	0	0.03600001	0.04707849	8.31E-02	0	0.009	0.01647754	2.53E-02	0	0	0	1,386	0.008%
17 FDMK Class 8	Natural Gas	0.0167608	0.17232782	4.97691357	0	0.00252429	0.03600001	0.09413738	1.33E-01	0.00232099	0.009	0.03293508	4.43E-02	1151.70121	0.17306642	0.23478183	16	0.000%
17 Public Class 8	Electricity	0.02832841	1.99900038	0.14812039	0.01541227	0.01034735	0.03600001	0.10584132	1.33E-01	0.00989992	0.009	0.03739466	5.63E-02	1627.69166	0.00123207	0.25643448	9,493	0.048%
17 Public Class 8	Electricity	0	0	0	0	0	0.03600001	0.01429321	9.93E-02	0	0.009	0.01899962	2.86E-02	0	0	0	6,036	0.030%
17 Public Class 8	Natural Gas	0.02445003	0.28692171	8.17725606	0	0.00255028	0.03600001	0.10606057	1.45E-01	0.00599403	0.009	0.03710213	4.91E-02	1467.62468	0.17112652	0.29916849	74	0.000%
17 Single Concrete/Transit Mix Class 8	Electricity	0.00863029	0.80494454	0.04368774	0.01371137	0.01372614	0.03600001	0.08862722	1.38E-01	0.01312326	0.009	0.03101953	5.32E-02	1447.76572	0.00040083	0.22812739	1,633	0.008%
17 Single Concrete/Transit Mix Class 8	Electricity	0	0	0	0	0	0.03600001	0.04543891	8.04E-02	0	0.009	0.01533618	2.45E-02	0	0	0	2,292	0.012%
17 Single Concrete/Transit Mix Class 8	Natural Gas	0.01524607	0.16369815	4.04417909	0	0.00252313	0.03600001	0.08862626	1.27E-01	0.00207351	0.009	0.03101919	4.21E-02	1124.66721	0.166705219	0.22927077	102	0.001%
17 Single Dump Class 8	Electricity	0.01037331	1.09445197	0.05621439	0.01413058	0.01760641	0.03600001	0.08698802	1.41E-01	0.01683903	0.009	0.03044581	5.63E-02	1492.23579	0.00048181	0.23510236	6,233	0.031%
17 Single Dump Class 8	Electricity	0	0	0	0	0	0.03600001	0.04327007	8.04E-02									

Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region San Mateo

Calendar Year: 2045

Season: Annual

Vehicle Classification: EMFAC202x Category

Units: miles/day for CVMT and EVMT, trips/

											lbs/Mile			CO2eq/mt+ AACCL_RUNE					1.0E-06	
Vehicle Category	Fuel	B0G_RUNE	N0G_RUNE	CO_RUNE	SO2_RUNE	PM10_RUNE	PM10_PMTW	PM10_PMBW	PM10_Totd	X	PM2.5_RUNE	PM2.5_PMT	PM2.5_PMB	PM2.5_PMB	PM2.5_Totd	X	CH4_RUNE	NO2_RUNE		
All Other Buses	Diesel	2.311E-03	1.049E-03	1.713E-04	2.120E-05	6.648E-05	7.646E-05	1.017E-04	1.48E-04	1.361E-06	6.614E-06	1.560E-05	4.857E-05	3.239E+00	1.166E-05	1.878E-03	4.025E-04			
All Other Buses	Natural Gas	2.683E-03	1.697E-04	7.543E-03	0.000E+00	3.839E-06	2.646E-05	1.017E-04	1.302E-04	3.330E-06	6.614E-06	1.560E-05	4.574E-05	1.979E+00	1.878E-03	4.025E-04				
DA	Gasoline	5.890E-04	2.161E-03	9.340E-04	4.843E-06	1.084E-06	1.764E-05	1.302E-03	1.374E-03	9.946E-07	4.409E-05	3.257E-06	1.064E-05	4.898E-01	1.923E-06	6.340E-06				
DA	Diesel	9.909E-04	4.770E-05	2.743E-04	3.761E-06	2.301E-06	1.764E-05	1.504E-03	3.490E-03	2.100E-05	4.409E-05	3.272E-06	1.179E-05	3.969E-01	4.153E-07	6.333E-03				
DA	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.673E-06	2.731E-05	0.000E+00	4.409E-05	3.385E-06	7.793E-06	0.000E+00	0.000E+00	0.000E+00				
DA	Plug-In Hybrid	2.481E-06	5.842E-06	3.672E-04	2.420E-06	4.453E-07	1.764E-05	8.637E-06	2.672E-05	4.094E-07	4.409E-05	3.023E-06	7.842E-06	2.448E-01	7.089E-07	8.679E-07				
DT1	Gasoline	4.644E-03	4.636E-03	1.023E-03	5.601E-05	1.161E-06	1.764E-05	1.826E-05	3.706E-05	1.067E-05	4.409E-05	6.391E-06	1.187E-05	5.664E-01	2.123E-06	4.895E-06				
DT1	Diesel	2.656E-03	3.888E-03	2.793E-04	6.993E-06	8.934E-06	1.764E-05	1.816E-05	4.475E-05	8.566E-06	4.409E-05	6.337E-06	1.933E-05	7.330E-01	1.234E-06	1.163E-04				
DT1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.689E-06	2.733E-05	0.000E+00	4.409E-05	3.391E-06	7.800E-06	0.000E+00	0.000E+00	0.000E+00				
DT1	Plug-In Hybrid	2.474E-03	5.923E-03	3.650E-04	2.413E-06	4.311E-07	1.764E-05	8.635E-06	2.672E-05	3.964E-07	4.409E-05	3.029E-06	7.833E-06	2.441E-01	7.023E-07	8.515E-07				
DT2	Gasoline	8.516E-03	4.963E-03	1.136E-03	5.830E-06	1.119E-06	1.764E-05	1.814E-05	3.889E-05	1.029E-06	4.409E-05	6.347E-06	1.179E-05	5.897E-01	2.449E-06	4.887E-06				
DT2	Diesel	2.635E-03	3.944E-03	2.782E-04	5.184E-06	8.932E-06	1.764E-05	1.813E-05	4.470E-05	8.566E-06	4.409E-05	6.345E-06	1.930E-05	5.671E-01	1.233E-06	8.620E-05				
DT2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.690E-06	2.733E-05	0.000E+00	4.409E-05	3.391E-06	7.801E-06	0.000E+00	0.000E+00	0.000E+00				
DT2	Plug-In Hybrid	2.479E-06	5.837E-06	3.668E-04	2.417E-06	4.404E-07	1.764E-05	8.634E-06	2.672E-05	4.049E-07	4.409E-05	3.023E-06	7.843E-06	2.443E-01	7.019E-07	8.511E-07				
HD1	Gasoline	8.313E-04	3.392E-03	1.314E-03	1.624E-05	2.816E-06	1.764E-05	1.720E-04	1.924E-04	2.589E-06	4.409E-05	6.019E-05	6.718E-05	1.643E+00	2.392E-06	2.890E-06				
HD1	Diesel	1.862E-04	4.876E-04	4.876E-04	1.222E-05	3.889E-05	2.646E-05	1.220E-04	2.372E-04	3.712E-05	6.614E-06	6.019E-05	1.039E-06	3.222E+00	8.647E-06	2.035E-04				
HD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	8.598E-05	1.036E-04	0.000E+00	4.409E-05	3.009E-05	3.450E-05	0.000E+00	0.000E+00	0.000E+00				
HD2	Gasoline	7.412E-06	4.180E-03	1.323E-03	1.829E-05	2.797E-06	1.764E-05	2.004E-04	2.211E-04	2.572E-06	4.409E-05	7.022E-05	7.720E-05	1.850E+00	2.186E-06	3.954E-06				
HD2	Diesel	2.004E-04	6.906E-04	3.398E-04	1.457E-05	4.642E-05	2.646E-05	2.008E-04	2.735E-04	4.441E-03	6.614E-06	7.022E-05	1.214E-04	3.08E+00	1.024E-05	2.423E-04				
HD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	1.003E-04	1.179E-04	0.000E+00	4.409E-05	3.511E-05	3.953E-05	0.000E+00	0.000E+00	0.000E+00				
MCV	Gasoline	1.634E-03	1.006E-03	2.054E-02	4.040E-06	4.750E-06	8.818E-06	2.644E-05	4.002E-05	4.428E-06	2.205E-06	9.239E-06	1.589E-05	4.086E-01	2.743E-04	7.648E-05				
MDV	Gasoline	6.885E-06	3.176E-05	1.167E-03	7.064E-06	1.122E-06	1.764E-05	1.837E-03	3.713E-03	1.032E-06	4.409E-05	6.429E-06	1.187E-05	2.146E-01	2.743E-06	7.648E-06				
MDV	Diesel	9.019E-06	1.916E-05	2.951E-04	6.777E-06	1.801E-06	1.764E-05	1.839E-05	3.784E-05	7.425E-06	4.409E-05	6.433E-06	1.259E-05	7.110E-01	4.189E-07	1.130E-04				
MDV	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.702E-06	2.734E-05	0.000E+00	4.409E-05	3.396E-06	7.803E-06	0.000E+00	0.000E+00	0.000E+00				
MDV	Plug-In Hybrid	2.479E-06	5.833E-06	3.667E-04	2.417E-06	4.424E-07	1.764E-05	8.633E-06	2.674E-05	4.049E-07	4.409E-05	3.023E-06	7.848E-06	2.443E-01	7.023E-07	8.549E-07				
NH	Gasoline	5.118E-03	4.369E-04	3.444E-04	4.237E-03	3.799E-06	2.646E-05	9.925E-05	1.900E-04	3.033E-06	6.614E-06	3.474E-05	4.438E-05	4.288E+00	8.832E-06	4.002E-03				
NH	Diesel	1.740E-04	5.318E-03	4.932E-04	2.274E-03	3.753E-03	3.327E-03	9.873E-05	1.715E-04	3.391E-03	8.818E-06	3.456E-03	7.929E-03	2.400E+00	8.083E-06	3.781E-04				
Motor Coach	Diesel	3.221E-03	2.034E-03	7.913E-03	3.197E-03	5.216E-03	2.646E-05	1.796E-04	2.582E-04	4.991E-03	6.614E-06	6.287E-03	1.194E-04	3.374E+00	1.078E-06	5.319E-04				
ORUS	Gasoline	3.036E-04	4.395E-04	2.752E-04	3.305E-03	2.923E-06	2.646E-05	9.876E-05	1.381E-04	2.489E-06	6.614E-06	3.457E-05	4.387E-05	3.343E+00	7.558E-06	2.948E-03				
ORUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.938E-05	7.584E-05	0.000E+00	4.409E-05	1.728E-03	2.390E-05	0.000E+00	0.000E+00	0.000E+00				
PTD	Diesel	3.454E-03	5.824E-03	4.204E-04	3.700E-03	9.354E-05	0.000E+00	0.000E+00	9.354E-06	8.949E-06	0.000E+00	0.000E+00	8.949E-06	3.908E+00	1.381E-06	6.157E-04				
PTD	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00				
SRUS	Gasoline	1.884E-03	1.849E-04	4.114E-04	1.549E-03	2.784E-06	1.764E-05	9.902E-03	1.194E-04	2.560E-06	4.409E-05	3.466E-03	4.163E-03	4.309E-04	1.887E-03					
SRUS	Diesel	1.548E-03	8.400E-04	1.222E-04	2.186E-03	7.514E-05	2.646E-05	9.902E-03	1.330E-04	7.189E-05	6.614E-06	3.466E-03	4.844E-03	2.308E+00	7.190E-07	3.636E-04				
SRUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.007E-05	4.551E-05	7.048E-05	0.000E+00	5.242E-06	1.733E-03	1.257E-03	0.000E+00	0.000E+00	0.000E+00				
SRUS	Natural Gas	8.124E-03	3.642E-04	1.679E-02	0.000E+00	8.100E-06	2.646E-05	9.902E-03	1.336E-04	7.448E-06	6.614E-06	3.466E-03	4.872E-03	2.438E+00	5.687E-03	4.970E-04				
T6 CARP Class 4	Diesel	1.180E-03	3.902E-04	6.049E-05	2.120E-03	1.189E-03	2.646E-05	9.329E-03	1.316E-04	1.137E-03	6.614E-06	3.265E-03	5.064E-03	2.239E+00	5.482E-07	3.528E-04				
T6 CARP Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.644E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-03	3.294E-03	0.000E+00	0.000E+00	0.000E+00				
T6 CARP Class 5	Diesel	1.183E-03	3.922E-04	6.059E-05	2.121E-03	1.191E-03	2.646E-05	9.329E-03	1.317E-04	1.140E-03	6.614E-06	3.265E-03	5.064E-03	2.240E+00	5.473E-07	3.529E-04				
T6 CARP Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.644E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-03	3.294E-03	0.000E+00	0.000E+00	0.000E+00				
T6 CARP Class 6	Diesel	1.172E-03	3.918E-04	6.035E-05	2.118E-03	1.193E-03	2.646E-05	9.329E-03	1.317E-04	1.141E-03	6.614E-06	3.265E-03	5.064E-03	2.237E+00	5.465E-07	3.524E-04				
T6 CARP Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.644E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-03	3.294E-03	0.000E+00	0.000E+00	0.000E+00				
T6 CARP Class 7	Diesel	1.267E-03	4.277E-04	6.497E-05	1.891E-05	1.263E-05	2.646E-05	9.329E-03	1.324E-04	1.209E-03	6.614E-06	3.265E-03	5.133E-03	1.974E+00	5.886E-07	3.113E-04				
T6 CARP Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.644E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-03	3.294E-03	0.000E+00	0.000E+00	0.000E+00				
T6 Intense Delivery Class 4	Diesel	1.340E-03	7.919E-04	1.176E-04	2.191E-05	4.218E-06	2.646E-05	1.049E-04	1.355E-04	4.036E-06	6.614E-06	3.670E-03	4.733E-03	2.314E+00	6.222E-07	3.643E-04				
T6 Intense Delivery Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.243E-03	7.888E-03	0.000E+00	6.614E-06	1.833E-03	2.496E-03	0.000E+00	0.000E+00	0.000E+00				
T6 Intense Delivery Class 4	Natural Gas	2.749E-03	1.327E-04	8.413E-03	0.000E+00	4.448E-06	2.646E-05	1.049E-04	1.398E-04	4.083E-06	6.614E-06	3.670E-03	4.742E-03	2.222E+00	1.924E-03	4.232E-04				
T6 Intense Delivery Class 5	Diesel	1.343E-03	7.926E-04	1.176E-04	2.193E-05	4.222E-06	2.646E-05	1.049E-04	1.355E-04	4.039E-06	6.614E-06	3.670E-03	4.733E-03	2.318E+00	6.244E-07	3.652E-04				
T6 Intense Delivery Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.243E-03	7.888E-03	0.000E+00	6.614E-06	1.833E-03	2.496E-03	0.000E+00	0.000E+00	0.000E+00				
T6 Intense Delivery Class 5	Natural Gas	2.749E-03	1.333E-04	8.414E-03	0.000E+00	4.447E-06	2.646E-05	1.049E-04	1.397E-04	4.080E-06	6.614E-06	3.670E-03	4.733E-03	2.217E+00	1.924E-03	4.232E-04				
T6 Intense Delivery Class 6	Diesel	1.342E-03	8.029E-04	1.178E-04	2.193E-05	4.233E-06	2.646E-05	1.049E-04	1.355E-04	4.050E-06	6.614E-06	3.670E-03	4.736E-03							

16 Insulate Other Class 6	Neutral Gas	2.194E-03	1.131E-04	5.899E-03	0.000E+00	3.429E-06	2.646E-05	9.891E-03	1.288E-04	3.133E-06	6.614E-06	3.462E-05	4.438E-05	1.934E+00	1.337E-03	3.943E-04
16 Insulate Other Class 7	Default	0.599E-03	8.898E-03	1.141E-04	2.144E-05	8.793E-05	2.646E-05	9.891E-03	1.426E-04	8.413E-05	6.614E-06	3.462E-05	4.964E-05	2.564E+00	7.429E-07	3.571E-04
16 Insulate Other Class 7	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.945E-05	7.391E-05	0.000E+00	6.614E-06	1.731E-05	3.292E-05	0.000E+00	0.000E+00	0.000E+00
16 Insulate Other Class 7	Neutral Gas	2.099E-03	2.026E-04	5.993E-03	0.000E+00	2.934E-06	2.646E-05	9.891E-03	1.283E-04	2.698E-06	6.614E-06	3.462E-05	4.392E-05	1.979E+00	1.449E-03	4.022E-04
16 Insulate Tractor Class 6	Default	1.184E-03	5.693E-04	8.104E-03	2.124E-05	6.773E-06	2.646E-05	9.891E-03	1.321E-04	6.460E-06	6.614E-06	3.462E-05	4.771E-05	2.244E+00	5.497E-07	3.537E-04
16 Insulate Tractor Class 6	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.945E-05	7.391E-05	0.000E+00	6.614E-06	1.731E-05	3.292E-05	0.000E+00	0.000E+00	0.000E+00
16 Insulate Tractor Class 6	Neutral Gas	2.194E-03	1.153E-04	5.891E-03	0.000E+00	3.427E-06	2.646E-05	9.891E-03	1.288E-04	3.131E-06	6.614E-06	3.462E-05	4.438E-05	1.933E+00	1.337E-03	3.940E-04
16 Insulate Tractor Class 7	Default	0.514E-03	0.020E-03	1.156E-04	1.936E-05	8.696E-06	2.646E-05	9.891E-03	1.241E-04	8.237E-06	6.614E-06	3.462E-05	4.955E-05	2.664E+00	7.043E-07	3.224E-04
16 Insulate Tractor Class 7	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.945E-05	7.391E-05	0.000E+00	6.614E-06	1.731E-05	3.292E-05	0.000E+00	0.000E+00	0.000E+00
16 Insulate Tractor Class 7	Neutral Gas	2.111E-03	1.914E-04	5.972E-03	0.000E+00	2.984E-06	2.646E-05	9.891E-03	1.283E-04	2.743E-06	6.614E-06	3.462E-05	4.397E-05	1.926E+00	1.477E-03	3.927E-04
16 OGS Class 4	Default	1.134E-05	4.849E-04	5.912E-05	1.999E-05	1.227E-05	2.646E-05	9.329E-03	1.724E-03	1.174E-05	6.614E-06	2.656E-05	3.106E-05	2.102E+00	5.361E-07	3.311E-04
16 OGS Class 5	Default	1.159E-05	4.921E-04	4.930E-05	1.992E-05	1.231E-05	2.646E-05	9.329E-03	1.321E-04	1.178E-05	6.614E-06	3.265E-05	3.104E-05	2.102E+00	5.383E-07	3.314E-04
16 OGS Class 6	Default	1.148E-05	4.812E-04	5.888E-05	1.984E-05	1.221E-05	2.646E-05	9.329E-03	1.320E-04	1.169E-05	6.614E-06	3.265E-05	3.092E-05	2.097E+00	5.334E-07	3.304E-04
16 OGS Class 7	Default	1.239E-05	5.084E-04	6.333E-05	1.790E-05	1.293E-05	2.646E-05	9.329E-03	1.271E-04	1.239E-05	6.614E-06	3.265E-05	3.163E-05	1.899E+00	3.737E-07	2.978E-04
16 Public Class 4	Default	1.302E-03	1.378E-03	1.390E-04	2.355E-05	9.963E-06	2.646E-05	1.018E-04	1.328E-04	9.453E-06	6.614E-06	3.562E-05	3.179E-05	2.413E+00	1.534E-06	3.802E-04
16 Public Class 4	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.733E-05	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
16 Public Class 4	Neutral Gas	2.779E-03	1.334E-04	6.741E-03	0.000E+00	3.930E-06	2.646E-05	1.018E-04	1.322E-04	3.614E-06	6.614E-06	3.562E-05	4.983E-05	2.169E+00	1.943E-03	4.421E-04
16 Public Class 5	Default	2.917E-03	1.232E-03	1.357E-04	2.588E-05	8.701E-06	2.646E-05	1.018E-04	1.349E-04	8.329E-06	6.614E-06	3.562E-05	3.054E-05	2.414E+00	1.353E-06	3.806E-04
16 Public Class 5	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.733E-05	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
16 Public Class 5	Neutral Gas	2.734E-03	1.718E-04	6.738E-03	0.000E+00	3.749E-06	2.646E-05	1.018E-04	1.320E-04	3.447E-06	6.614E-06	3.562E-05	4.569E-05	2.191E+00	1.929E-03	4.467E-04
16 Public Class 6	Default	2.831E-03	1.193E-03	1.314E-04	2.595E-05	8.702E-06	2.646E-05	1.018E-04	1.349E-04	8.323E-06	6.614E-06	3.562E-05	3.054E-05	2.408E+00	1.311E-06	3.794E-04
16 Public Class 6	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.733E-05	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
16 Public Class 6	Neutral Gas	2.773E-03	1.451E-04	6.748E-03	0.000E+00	3.873E-06	2.646E-05	1.018E-04	1.321E-04	3.563E-06	6.614E-06	3.562E-05	4.589E-05	2.170E+00	1.940E-03	4.423E-04
16 Public Class 7	Default	2.391E-03	1.023E-03	1.173E-04	2.233E-05	7.724E-06	2.646E-05	1.018E-04	1.340E-04	7.392E-06	6.614E-06	3.562E-05	4.937E-05	2.378E+00	1.111E-06	3.744E-04
16 Public Class 7	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.733E-05	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
16 Public Class 7	Neutral Gas	2.778E-03	1.362E-04	6.744E-03	0.000E+00	3.918E-06	2.646E-05	1.018E-04	1.322E-04	3.602E-06	6.614E-06	3.562E-05	4.584E-05	2.179E+00	1.944E-03	4.442E-04
16 Utility Class 5	Default	1.132E-05	4.766E-04	7.856E-05	2.134E-05	1.114E-06	2.646E-05	1.003E-04	1.319E-04	4.893E-06	6.614E-06	3.511E-05	4.661E-05	2.243E+00	5.233E-07	3.513E-04
16 Utility Class 5	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.013E-05	7.661E-05	0.000E+00	6.614E-06	1.735E-05	2.417E-05	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 5	Neutral Gas	2.453E-03	1.193E-04	6.052E-03	0.000E+00	3.607E-06	2.646E-05	1.003E-04	1.304E-04	3.317E-06	6.614E-06	3.511E-05	4.504E-05	2.019E+00	1.718E-03	4.113E-04
16 Utility Class 6	Default	1.128E-05	4.636E-04	7.838E-05	2.134E-05	5.078E-06	2.646E-05	1.003E-04	1.318E-04	4.858E-06	6.614E-06	3.511E-05	4.638E-05	2.243E+00	5.234E-07	3.513E-04
16 Utility Class 6	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.013E-05	7.661E-05	0.000E+00	6.614E-06	1.735E-05	2.417E-05	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 6	Neutral Gas	2.453E-03	1.193E-04	6.052E-03	0.000E+00	3.607E-06	2.646E-05	1.003E-04	1.304E-04	3.317E-06	6.614E-06	3.511E-05	4.504E-05	2.019E+00	1.718E-03	4.113E-04
16 Utility Class 7	Default	1.145E-05	4.933E-04	7.931E-05	2.135E-05	5.093E-06	2.646E-05	1.003E-04	1.318E-04	4.893E-06	6.614E-06	3.511E-05	4.633E-05	2.244E+00	5.178E-07	3.513E-04
16 Utility Class 7	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.013E-05	7.661E-05	0.000E+00	6.614E-06	1.735E-05	2.417E-05	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 7	Neutral Gas	2.453E-03	1.193E-04	6.052E-03	0.000E+00	3.607E-06	2.646E-05	1.003E-04	1.304E-04	3.317E-06	6.614E-06	3.511E-05	4.504E-05	2.019E+00	1.718E-03	4.113E-04
16T5	Cooling	2.396E-03	1.509E-04	5.972E-04	3.233E-05	3.298E-06	2.646E-05	9.475E-03	1.300E-04	3.033E-06	6.614E-06	3.474E-05	4.438E-05	3.991E+00	6.233E-06	1.464E-03
16T5	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.962E-05	7.508E-05	0.000E+00	6.614E-06	1.737E-05	3.298E-05	0.000E+00	0.000E+00	0.000E+00
17 CAIRP Class B	Default	2.320E-03	2.643E-03	8.123E-05	2.649E-05	5.549E-05	7.937E-05	1.804E-04	3.253E-04	6.264E-05	1.984E-05	6.315E-05	4.564E-04	2.819E+00	1.170E-06	4.441E-04
17 CAIRP Class B	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.028E-05	7.966E-04	0.000E+00	1.984E-05	3.168E-05	1.144E-05	0.000E+00	0.000E+00	0.000E+00
17 CAIRP Class B	Neutral Gas	3.944E-03	3.367E-04	6.337E-03	0.000E+00	4.333E-06	7.937E-05	1.804E-04	2.641E-04	3.984E-06	1.984E-05	6.314E-05	8.697E-05	3.233E+00	2.062E-07	4.997E-04
17 NHOOS Class B	Default	2.450E-05	2.921E-03	8.293E-05	2.534E-05	6.463E-05	7.937E-05	1.804E-04	3.244E-04	6.183E-05	1.984E-05	6.314E-05	1.448E-04	2.699E+00	1.138E-06	4.233E-04
17 NHOOS Class B	Bioethanol	0.527E-03	1.990E-03	8.330E-05	2.534E-05	6.848E-05	7.937E-05	1.804E-04	3.262E-04	6.544E-05	1.984E-05	6.313E-05	4.883E-04	2.699E+00	1.174E-06	4.230E-04
17 Other Part Class B	Default	2.313E-03	2.713E-03	1.400E-04	2.863E-05	3.611E-05	7.937E-05	2.076E-04	3.123E-04	3.444E-05	1.984E-05	7.268E-05	1.271E-04	3.023E+00	1.027E-06	4.743E-04
17 Other Part Class B	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	1.038E-04	1.832E-04	0.000E+00	1.984E-05	3.633E-05	6.617E-05	0.000E+00	0.000E+00	0.000E+00
17 PDAM Class B	Default	2.234E-03	2.821E-03	1.428E-04	2.834E-05	3.777E-05	7.937E-05	2.076E-04	3.247E-04	3.614E-05	1.984E-05	7.268E-05	1.284E-04	3.013E+00	1.048E-06	4.748E-04
17 PDAM Class B	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	1.038E-04	1.832E-04	0.000E+00	1.984E-05	3.633E-05	6.617E-05	0.000E+00	0.000E+00	0.000E+00
17 PDAM Class B	Neutral Gas	3.693E-03	3.804E-04	1.097E-02	0.000E+00	5.545E-06	7.937E-05	2.076E-04	2.923E-04	5.117E-06	1.984E-05	7.263E-05	9.261E-05	2.539E+00	2.584E-03	5.176E-04
17 Public Class B	Default	6.289E-05	4.407E-03	1.363E-04	3.398E-05	2.281E-05	7.937E-05	2.353E-04	3.377E-04	2.183E-05	1.984E-05	8.244E-05	1.241E-04	3.588E+00	2.921E-06	3.644E-04
17 Public Class B	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	1.197E-04	1.960E-04	0.000E+00	1.984E-05	4.189E-05	6.173E-05	0.000E+00	0.000E+00	0.000E+00
17 Public Class B	Neutral Gas	3.390E-03	6.323E-04	1.803E-02	0.000E+00	7.179E-06	7.937E-05	2.337E-04	3.302E-04	6.601E-06	1.984E-05	8.180E-05	1.082E-04	3.232E+00	3.773E-03	6.596E-04
17 Single Concrete/Transit Mix Class B	Default	1.903E-05	1.773E-03	9.631E-05	3.023E-05	3.024E-05	7.937E-05	1.954E-04	3.030E-04	2.893E-05	1.984E-05	6.839E-05	1.173E-04	3.193E+00	8.837E-07	5.029E-04
17 Single Concrete/Transit Mix Class B	Bioethanol	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.786E-05	1.722E-04	0.000E+00	1.984E-05	3.425E-05	2.409E-05	0.000E+00	0.000E+00	0.000E+00
17 Single Concrete/Transit Mix Class B	Neutral Gas	3.361E-03	3.609E-04	8.914E-03	0.000E+00	4.972E-06	7.937E-05	1.954E-04	2.997E-04	4.871E-06	1.984E-05	6.838E-05	9.280E-05	2.479E+00	2.332E-03	5.035E-04
17 Single Dump Class B	Default	2.														

Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region: San Mateo

Calendar Year: 2045

Season: Annual

Vehicle Classification: EMFAC202x Category

Units: miles/day for CVMT and EVMT, trips/

MTons/Mile															CO2eq/only+			
Vehicle Category	Fuel	PM2.5, RUNE										PM2.5, PMT		PM2.5, PMB		CO2eq, RUNE		
		B02_RUNEY	N02_RUNEY	CO2_RUNEY	S02_RUNEY	PM10_RUNEY	PM10_PMTW	PM10_PMBW	PM10_Totals	PM2.5_RUNEY	PM2.5_PMTW	PM2.5_PMBW	PM2.5_Totals	CH4_RUNEY	N2O_RUNEY			
All Other Buses	Diesel	1.139E-08	4.756E-07	7.771E-08	9.615E-09	3.014E-09	1.200E-08	4.614E-08	6.115E-08	2.885E-09	3.000E-09	1.615E-08	2.203E-08	1.015E-03	5.251E-10			
Natural Gas		1.217E-08	7.699E-08	3.422E-06	0.000E+00	1.741E-09	1.200E-08	4.614E-08	5.988E-08	1.601E-09	3.000E-09	1.615E-08	2.073E-08	8.937E-04	8.519E-07			
Gasoline		2.672E-09	1.887E-08	4.237E-07	2.197E-09	4.916E-10	8.000E-09	6.813E-09	1.530E-08	4.520E-10	2.000E-09	2.383E-09	4.837E-09	2.222E-04	8.731E-10			
DA	Diesel	4.082E-09	1.264E-08	1.244E-07	1.704E-09	9.984E-10	8.000E-09	6.832E-09	1.913E-08	9.544E-10	2.000E-09	2.391E-09	3.347E-09	1.800E-04	1.898E-10			
DA	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.387E-09	1.239E-08	0.000E+00	2.000E-09	1.534E-09	3.534E-09	0.000E+00	0.000E+00			
DA	Plug-In Hybrid	1.123E-09	2.650E-09	1.663E-07	1.098E-09	2.020E-10	8.000E-09	3.918E-09	1.212E-08	1.837E-10	2.000E-09	1.371E-09	3.557E-09	1.110E-04	3.215E-10			
LD1	Gasoline	3.014E-09	2.103E-08	4.440E-07	2.541E-09	5.245E-10	8.000E-09	8.283E-09	1.681E-08	4.841E-10	2.000E-09	2.899E-09	3.38E-09	2.570E-04	9.429E-10			
LD1	Diesel	2.051E-08	2.674E-08	1.248E-09	3.172E-09	4.061E-09	8.000E-09	8.238E-09	2.030E-08	3.884E-09	2.000E-09	2.883E-09	8.769E-09	3.348E-04	5.994E-10			
LD1	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.393E-09	1.239E-08	0.000E+00	2.000E-09	1.538E-09	3.538E-09	0.000E+00	0.000E+00			
LD1	Plug-In Hybrid	1.123E-09	2.642E-09	1.660E-07	1.094E-09	1.554E-10	8.000E-09	3.926E-09	1.212E-08	1.798E-10	2.000E-09	1.374E-09	3.544E-09	1.107E-04	3.183E-10			
LD2	Gasoline	3.863E-09	2.211E-08	5.154E-07	2.445E-09	5.073E-10	8.000E-09	8.224E-09	1.673E-08	4.664E-10	2.000E-09	2.879E-09	3.544E-09	2.673E-04	1.202E-09			
LD2	Diesel	1.204E-08	2.703E-08	1.262E-07	2.332E-09	4.032E-09	8.000E-09	8.223E-09	2.027E-08	3.874E-09	2.000E-09	2.878E-09	8.754E-09	2.483E-04	5.593E-10			
LD2	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.393E-09	1.240E-08	0.000E+00	2.000E-09	1.538E-09	3.538E-09	0.000E+00	0.000E+00			
LD2	Plug-In Hybrid	1.124E-09	2.647E-09	1.664E-07	1.097E-09	1.998E-10	8.000E-09	3.925E-09	1.213E-08	1.837E-10	2.000E-09	1.374E-09	3.558E-09	1.109E-04	3.184E-10			
HD1	Gasoline	3.771E-09	1.538E-08	5.961E-07	7.348E-09	1.277E-09	8.000E-09	7.800E-08	8.728E-08	1.174E-09	2.000E-09	2.736E-08	3.047E-08	7.453E-04	1.083E-09			
HD1	Diesel	8.444E-08	2.118E-07	2.122E-07	5.681E-07	1.705E-08	1.200E-08	7.800E-08	1.074E-07	1.684E-08	3.000E-09	2.736E-08	3.047E-08	2.994E-04	3.922E-09			
HD1	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	3.900E-08	4.700E-08	0.000E+00	2.000E-09	1.365E-08	1.563E-08	0.000E+00	0.000E+00			
HD2	Gasoline	3.362E-09	1.894E-08	6.012E-07	8.293E-09	1.269E-09	8.000E-09	5.100E-08	1.003E-07	1.167E-09	2.000E-09	3.185E-08	3.502E-08	8.391E-04	9.918E-10			
HD2	Diesel	9.998E-08	2.690E-07	2.337E-07	6.611E-07	2.108E-08	1.200E-08	9.100E-08	1.241E-07	2.013E-08	3.000E-09	3.185E-08	3.505E-08	6.977E-04	4.844E-09			
HD2	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.503E-08	5.305E-08	0.000E+00	2.000E-09	1.935E-08	1.793E-08	0.000E+00	0.000E+00			
MCV	Gasoline	7.412E-07	4.562E-07	9.316E-06	1.832E-09	2.153E-09	4.000E-09	1.200E-08	1.815E-08	2.009E-09	1.000E-09	4.200E-09	7.209E-09	1.853E-04	1.243E-07			
MDV	Gasoline	4.030E-09	2.349E-08	3.798E-07	3.204E-09	3.097E-10	8.000E-09	8.333E-09	1.684E-08	4.681E-10	2.000E-09	2.916E-09	3.584E-09	3.341E-04	1.243E-09			
MDV	Diesel	4.491E-09	8.692E-09	1.338E-07	3.034E-09	8.306E-10	8.000E-09	8.340E-09	1.775E-08	7.903E-10	2.000E-09	2.919E-09	3.709E-09	3.223E-04	1.900E-10			
MDV	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.401E-09	1.240E-08	0.000E+00	2.000E-09	1.540E-09	3.540E-09	0.000E+00	0.000E+00			
HH	Plug-In Hybrid	1.124E-09	2.647E-09	1.663E-07	1.094E-09	2.007E-10	8.000E-09	3.929E-09	1.213E-08	1.846E-10	2.000E-09	1.372E-09	3.563E-09	1.109E-04	3.190E-10			
NH	Gasoline	1.142E-08	1.982E-07	1.563E-07	1.923E-08	1.496E-09	1.200E-08	4.920E-08	5.851E-08	3.766E-09	3.000E-09	3.766E-08	2.013E-08	1.944E-03	4.004E-09			
NH	Diesel	7.893E-08	2.412E-06	2.244E-07	1.031E-08	1.703E-08	1.600E-08	4.479E-08	7.781E-08	1.629E-08	4.000E-09	3.567E-08	3.594E-08	1.089E-03	3.644E-09			
Motor Coach	Diesel	1.033E-08	9.318E-07	3.590E-08	1.430E-08	2.364E-08	1.200E-08	8.147E-08	1.171E-07	2.204E-08	3.000E-09	2.852E-08	5.413E-08	1.531E-03	4.891E-10			
ORUS	Gasoline	1.384E-08	1.992E-07	2.602E-07	1.499E-08	1.337E-09	1.200E-08	4.480E-08	5.813E-08	1.220E-09	3.000E-09	3.568E-08	1.992E-08	1.514E-03	3.454E-09			
ORUS	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.240E-08	3.440E-08	0.000E+00	3.000E-09	7.840E-09	1.084E-08	0.000E+00	0.000E+00			
PTO	Diesel	1.544E-08	2.642E-06	1.908E-07	1.678E-08	4.234E-09	0.000E+00	0.000E+00	0.000E+00	4.543E-09	4.059E-09	0.000E+00	4.059E-09	1.773E-03	7.172E-10			
PTO	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00			
SRUS	Gasoline	8.548E-09	8.386E-08	1.864E-07	7.024E-09	1.263E-09	8.000E-09	4.492E-08	5.418E-08	1.161E-09	2.000E-09	1.572E-08	1.888E-08	7.107E-04	1.954E-09			
SRUS	Diesel	7.021E-09	3.810E-07	5.545E-08	9.913E-09	3.408E-09	1.200E-08	4.492E-08	6.033E-08	3.261E-09	3.000E-09	1.572E-08	2.198E-08	1.047E-03	3.261E-10			
SRUS	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.311E-09	2.246E-08	3.192E-08	0.000E+00	2.378E-09	7.840E-09	1.024E-08	0.000E+00	0.000E+00			
SRUS	Natural Gas	3.684E-08	2.539E-07	7.617E-06	0.000E+00	3.674E-09	1.200E-08	4.492E-08	6.059E-08	3.378E-09	3.000E-09	1.572E-08	2.210E-08	1.104E-03	2.580E-04			
16 CARP Class 4	Diesel	8.333E-09	1.770E-07	2.744E-08	9.618E-09	5.392E-09	1.200E-08	4.231E-08	5.971E-08	5.159E-09	3.000E-09	1.481E-08	2.297E-08	1.014E-03	2.484E-10			
16 CARP Class 4	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.116E-08	0.000E+00	3.000E-09	7.405E-09	1.042E-08	0.000E+00	0.000E+00			
16 CARP Class 5	Diesel	5.363E-09	1.783E-07	2.748E-08	9.622E-09	5.404E-09	1.200E-08	4.231E-08	5.972E-08	5.170E-09	3.000E-09	1.481E-08	2.298E-08	1.016E-03	2.492E-10			
16 CARP Class 5	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.116E-08	0.000E+00	3.000E-09	7.405E-09	1.042E-08	0.000E+00	0.000E+00			
16 CARP Class 6	Diesel	5.330E-09	1.772E-07	2.727E-08	9.607E-09	5.411E-09	1.200E-08	4.231E-08	5.972E-08	5.177E-09	3.000E-09	1.481E-08	2.299E-08	1.013E-03	2.490E-10			
16 CARP Class 6	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.116E-08	0.000E+00	3.000E-09	7.405E-09	1.042E-08	0.000E+00	0.000E+00			
16 CARP Class 7	Diesel	5.748E-09	1.940E-07	2.947E-08	8.484E-09	5.730E-09	1.200E-08	4.231E-08	6.004E-08	5.482E-09	3.000E-09	1.481E-08	2.329E-08	8.962E-04	2.670E-10			
16 CARP Class 7	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.116E-08	0.000E+00	3.000E-09	7.405E-09	1.042E-08	0.000E+00	0.000E+00			
16 Intense Delivery Class 4	Diesel	6.075E-09	3.952E-07	5.333E-08	9.938E-09	1.913E-09	1.200E-08	4.756E-08	6.148E-08	1.831E-09	3.000E-09	1.665E-08	2.148E-08	1.052E-03	2.822E-10			
16 Intense Delivery Class 4	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.378E-08	3.378E-08	0.000E+00	3.000E-09	8.324E-09	1.132E-08	0.000E+00	0.000E+00			
16 Intense Delivery Class 5	Natural Gas	1.247E-08	6.619E-08	1.817E-06	0.000E+00	2.014E-09	1.200E-08	4.756E-08	6.138E-08	1.832E-09	3.000E-09	1.665E-08	2.158E-08	1.067E-03	8.728E-07			
16 Intense Delivery Class 6	Diesel	6.105E-09	4.221E-07	7.037E-08	1.921E-08	2.493E-09	1.200E-08	4.756E-08	6.204E-08	2.384E-09	3.000E-09	1.665E-08	2.203E-08	1.076E-03	3.750E-10			
16 Intense Delivery Class 6	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.378E-08	3.378E-08	0.000E+00	3.000E-09	8.324E-09	1.132E-08	0.000E+00	0.000E+00			
16 Intense Delivery Class 6	Natural Gas	1.247E-08	6.643E-08	1.816E-06	0.000E+00	2.013E-09	1.200E-08	4.756E-08	6.138E-08	1.830E-09	3.000E-09	1.665E-08	2.158E-08	1.064E-03	8.728E-07			
16 Intense Delivery Class 7	Diesel	6.074E-09	4.221E-07	7.037E-08	1.921E-08	2.493E-09	1.200E-08	4.756E-08	6.204E-08	2.384E-09	3.000E-09	1.665E-08	2.203E-08	1.076E-03	3.750E-10			
16 Intense Delivery Class 7	Battery	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.378E-08	3.378E-08	0.000E+00	3.000E-09	8.324E-09	1.132E-08	0.000E+00	0.000E+00			
16 Intense Delivery Class 7	Natural Gas	1.247E-08	6.623E-08	1.817E-06	0.000E+00	2.014E-09	1.200E-08	4.756E-08	6.138E-08	1.832E-09	3.000E-09	1.665E-08	2.158E-08	1.064E-03	8.727E-07			
16 Intense Other Class 4	Diesel	6.074E-09	4.221E-07	7.037E-08	1.921E-08	2.493E-09	1.200E-08	4.756E-08	6.204E-08	2.384E-09	3.000E-09	1.665E-08	2.203E-08	1.076E-03	3.750E-10			



16 Insulae Other Class 6	Natural Gas	9.961E-09	5.219E-08	2.672E-05	0.000E+00	1.553E-09	1.200E-08	4.486E-08	5.842E-08	1.430E-09	3.000E-09	1.570E-08	2.013E-08	8.773E-04	6.971E-07	1.798E-07
16 Insulae Other Class 7	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.543E-08	3.443E-08	0.000E+00	3.000E-09	7.851E-09	1.083E-08	0.000E+00	0.000E+00	0.000E+00
16 Insulae Other Class 7	Natural Gas	9.522E-09	9.190E-08	2.718E-05	0.000E+00	1.327E-09	1.200E-08	4.486E-08	5.819E-08	1.220E-09	3.000E-09	1.570E-08	1.992E-08	8.950E-04	6.664E-07	1.832E-07
16 Insulae Tractor Class 6	Diesel	5.370E-09	2.583E-07	4.131E-08	9.843E-09	3.072E-09	1.200E-08	4.486E-08	5.994E-08	2.939E-09	3.000E-09	1.570E-08	2.164E-08	1.018E-03	2.494E-10	1.604E-07
16 Insulae Tractor Class 6	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.543E-08	3.443E-08	0.000E+00	3.000E-09	7.851E-09	1.083E-08	0.000E+00	0.000E+00	0.000E+00
16 Insulae Tractor Class 6	Natural Gas	9.959E-09	5.238E-08	2.672E-05	0.000E+00	1.554E-09	1.200E-08	4.486E-08	5.842E-08	1.429E-09	3.000E-09	1.570E-08	2.013E-08	8.767E-04	6.970E-07	1.787E-07
16 Insulae Tractor Class 7	Diesel	6.878E-09	4.422E-07	6.243E-08	8.871E-07	3.745E-09	1.200E-08	4.486E-08	6.081E-08	3.775E-09	3.000E-09	1.570E-08	2.248E-08	1.386E-04	3.19E-10	1.416E-07
16 Insulae Tractor Class 7	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.543E-08	3.443E-08	0.000E+00	3.000E-09	7.851E-09	1.083E-08	0.000E+00	0.000E+00	0.000E+00
16 Insulae Tractor Class 7	Natural Gas	9.574E-09	8.682E-08	2.709E-05	0.000E+00	1.333E-09	1.200E-08	4.486E-08	5.822E-08	1.244E-09	3.000E-09	1.570E-08	1.992E-08	8.737E-04	6.700E-07	1.781E-07
16 OGS Class 4	Diesel	5.246E-09	2.986E-07	2.68E-08	9.027E-09	3.563E-09	1.200E-08	4.231E-08	5.986E-08	3.344E-09	3.000E-09	1.481E-08	2.313E-08	9.522E-04	2.423E-10	1.502E-07
16 OGS Class 5	Diesel	5.237E-09	2.233E-07	2.69E-08	9.934E-09	3.583E-09	1.200E-08	4.231E-08	5.990E-08	3.438E-09	3.000E-09	1.481E-08	2.313E-08	9.540E-04	2.442E-10	1.503E-07
16 OGS Class 6	Diesel	5.209E-09	2.183E-07	2.671E-08	9.908E-09	3.541E-09	1.200E-08	4.231E-08	5.983E-08	3.301E-09	3.000E-09	1.481E-08	2.311E-08	9.513E-04	2.420E-10	1.499E-07
16 OGS Class 7	Diesel	5.622E-09	2.307E-07	2.882E-08	8.118E-09	3.872E-09	1.200E-08	4.231E-08	6.019E-08	3.618E-09	3.000E-09	1.481E-08	2.343E-08	8.573E-04	2.611E-10	1.531E-07
16 Public Class 4	Diesel	5.498E-09	6.258E-07	6.302E-08	1.036E-08	4.529E-09	1.200E-08	4.617E-08	6.270E-08	4.333E-09	3.000E-09	1.616E-08	2.349E-08	1.093E-03	9.976E-10	1.724E-07
16 Public Class 4	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.508E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
16 Public Class 4	Natural Gas	1.261E-08	6.041E-08	1.038E-05	0.000E+00	1.783E-09	1.200E-08	4.617E-08	5.993E-08	1.699E-09	3.000E-09	1.616E-08	2.083E-08	9.838E-04	8.823E-07	2.003E-07
16 Public Class 5	Diesel	1.327E-08	5.587E-07	6.154E-08	1.031E-08	3.747E-09	1.200E-08	4.617E-08	6.121E-08	3.794E-09	3.000E-09	1.616E-08	2.294E-08	1.094E-03	6.144E-10	1.726E-07
16 Public Class 5	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.508E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
16 Public Class 5	Natural Gas	1.230E-08	7.791E-08	1.063E-05	0.000E+00	1.702E-09	1.200E-08	4.617E-08	5.997E-08	1.563E-09	3.000E-09	1.616E-08	2.072E-08	9.939E-04	8.720E-07	2.026E-07
16 Public Class 6	Diesel	1.284E-08	5.410E-07	5.971E-08	1.031E-08	3.746E-09	1.200E-08	4.617E-08	6.121E-08	3.773E-09	3.000E-09	1.616E-08	2.292E-08	1.092E-03	5.963E-10	1.721E-07
16 Public Class 6	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.508E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
16 Public Class 6	Natural Gas	1.237E-08	6.583E-08	1.061E-05	0.000E+00	1.758E-09	1.200E-08	4.617E-08	5.993E-08	1.616E-09	3.000E-09	1.616E-08	2.078E-08	9.842E-04	8.801E-07	2.006E-07
16 Public Class 7	Diesel	1.094E-08	4.440E-07	5.329E-08	1.031E-08	3.603E-09	1.200E-08	4.617E-08	6.147E-08	3.533E-09	3.000E-09	1.616E-08	2.251E-08	1.076E-03	1.030E-10	1.699E-07
16 Public Class 7	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.508E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
16 Public Class 7	Natural Gas	1.260E-08	6.177E-08	1.039E-05	0.000E+00	1.777E-09	1.200E-08	4.617E-08	5.993E-08	1.634E-09	3.000E-09	1.616E-08	2.077E-08	9.883E-04	8.818E-07	2.013E-07
16 Utility Class 5	Diesel	0.110E-09	1.93E-07	1.544E-08	6.613E-09	3.311E-09	1.200E-08	4.550E-08	5.952E-08	2.200E-09	3.000E-09	1.992E-08	2.114E-08	1.017E-03	3.37E-10	1.603E-07
16 Utility Class 5	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.273E-08	3.473E-08	0.000E+00	3.000E-09	7.962E-09	1.096E-08	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 5	Natural Gas	1.114E-08	5.410E-08	2.743E-05	0.000E+00	1.636E-09	1.200E-08	4.550E-08	5.913E-08	1.505E-09	3.000E-09	1.992E-08	2.043E-08	9.157E-04	7.793E-07	1.867E-07
16 Utility Class 6	Diesel	0.104E-09	1.888E-07	1.564E-08	6.613E-09	3.203E-09	1.200E-08	4.550E-08	5.900E-08	2.064E-09	3.000E-09	1.992E-08	2.113E-08	1.017E-03	3.371E-10	1.603E-07
16 Utility Class 6	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.273E-08	3.473E-08	0.000E+00	3.000E-09	7.962E-09	1.096E-08	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 6	Natural Gas	1.114E-08	5.410E-08	2.743E-05	0.000E+00	1.636E-09	1.200E-08	4.550E-08	5.913E-08	1.505E-09	3.000E-09	1.992E-08	2.043E-08	9.157E-04	7.793E-07	1.867E-07
16 Utility Class 7	Diesel	0.104E-09	1.848E-07	1.522E-08	6.613E-09	3.201E-09	1.200E-08	4.550E-08	5.970E-08	2.192E-09	3.000E-09	1.992E-08	2.113E-08	1.018E-03	3.347E-10	1.604E-07
16 Utility Class 7	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.273E-08	3.473E-08	0.000E+00	3.000E-09	7.962E-09	1.096E-08	0.000E+00	0.000E+00	0.000E+00
16 Utility Class 7	Natural Gas	1.114E-08	5.410E-08	2.743E-05	0.000E+00	1.636E-09	1.200E-08	4.550E-08	5.913E-08	1.505E-09	3.000E-09	1.992E-08	2.043E-08	9.157E-04	7.793E-07	1.867E-07
16T5	Coupling	1.084E-08	1.843E-08	1.802E-07	1.321E-08	1.496E-09	1.200E-08	4.502E-08	5.851E-08	1.376E-09	3.000E-09	1.574E-08	2.013E-08	1.538E-03	2.869E-09	6.630E-08
16T5	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.231E-08	3.451E-08	0.000E+00	3.000E-09	7.878E-09	1.088E-08	0.000E+00	0.000E+00	0.000E+00
17 CAIRP Class B	Diesel	1.143E-08	1.200E-06	3.867E-08	1.211E-08	2.971E-08	3.600E-08	8.184E-08	1.475E-07	2.842E-08	9.000E-09	2.864E-08	6.606E-08	1.279E-03	5.309E-10	2.014E-07
17 CAIRP Class B	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.005E-08	7.995E-08	0.000E+00	9.000E-09	4.73E-08	2.323E-08	0.000E+00	0.000E+00	0.000E+00
17 CAIRP Class B	Natural Gas	1.336E-08	1.527E-07	2.883E-05	0.000E+00	1.964E-09	3.600E-08	8.183E-08	1.198E-07	1.808E-09	9.000E-09	2.864E-08	3.943E-08	1.023E-03	9.32E-07	2.083E-07
17 NHOOS Class B	Diesel	1.111E-08	1.322E-06	3.762E-08	1.139E-08	2.922E-08	3.600E-08	8.182E-08	1.471E-07	2.805E-08	9.000E-09	2.864E-08	6.549E-08	1.224E-03	5.162E-10	1.929E-07
17 NHOOS Class B	Bicentricity	1.146E-08	1.363E-06	3.878E-08	1.139E-08	3.104E-08	3.600E-08	8.184E-08	1.489E-07	2.949E-08	9.000E-09	2.865E-08	6.724E-08	1.224E-03	5.223E-10	1.928E-07
17 Other Part Class B	Diesel	1.003E-08	1.231E-06	4.348E-08	1.299E-08	1.642E-08	3.600E-08	9.161E-08	1.444E-07	1.971E-08	9.000E-09	3.294E-08	2.767E-08	1.371E-03	4.660E-10	2.161E-07
17 Other Part Class B	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.708E-08	8.308E-08	0.000E+00	9.000E-09	1.448E-08	2.548E-08	0.000E+00	0.000E+00	0.000E+00
17 POAK Class B	Diesel	0.024E-08	1.280E-06	6.474E-08	1.294E-08	1.713E-08	3.600E-08	9.161E-08	1.473E-07	1.639E-08	9.000E-09	3.294E-08	5.833E-08	1.367E-03	4.754E-10	2.144E-07
17 POAK Class B	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.708E-08	8.308E-08	0.000E+00	9.000E-09	1.448E-08	2.548E-08	0.000E+00	0.000E+00	0.000E+00
17 POAK Class B	Natural Gas	1.676E-08	1.723E-07	4.977E-06	0.000E+00	2.524E-09	3.600E-08	9.161E-08	1.372E-07	2.321E-09	9.000E-09	3.294E-08	4.428E-08	1.152E-03	1.173E-06	2.548E-07
17 Public Class B	Diesel	2.833E-08	1.999E-06	1.481E-07	1.541E-08	1.033E-08	3.600E-08	1.068E-07	1.521E-07	9.900E-09	9.000E-09	3.739E-08	5.629E-08	1.628E-03	1.323E-09	2.544E-07
17 Public Class B	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	5.429E-08	9.029E-08	0.000E+00	9.000E-09	1.900E-08	2.890E-08	0.000E+00	0.000E+00	0.000E+00
17 Public Class B	Natural Gas	2.443E-08	2.849E-07	8.177E-06	0.000E+00	3.234E-09	3.600E-08	1.060E-07	1.453E-07	2.994E-09	9.000E-09	3.701E-08	4.910E-08	1.468E-03	1.711E-06	2.992E-07
17 Single Concrete/Transit Mix Class B	Diesel	8.630E-09	8.049E-07	4.369E-08	1.371E-08	1.373E-08	3.600E-08	8.863E-08	1.384E-07	1.313E-08	9.000E-09	3.102E-08	5.313E-08	1.448E-03	4.009E-10	2.281E-07
17 Single Concrete/Transit Mix Class B	Bicentricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.439E-08	8.029E-08	0.000E+00	9.000E-09	1.544E-08	2.454E-08	0.000E+00	0.000E+00	0.000E+00
17 Single Concrete/Transit Mix Class B	Natural Gas	1.523E-08	1.637E-07	4.044E-06	0.000E+00	2.235E-09	3.600E-08	8.863E-08	1.249E-07	2.074E-09	9.000E-09	3.102E-08	4.209E-08	1.126E-03	1.067E-06	2.292E-07
17 Single Dump Class B	Diesel	1.037E-08	1.094E-06	5.621E-08	1.413E-08	1.700E-08	3.600E-08	8.649E-08	1.406E-07	1.684E-08	9.000E-09	3.045E-08	5.628E-08	1.492E-03	4.818E-10	2.331E-07
17 Single Dump Class B	Bicentricity															

## San Carlos Community GHG Emissions Inventory and Forecast

Category	Existing		GP 2045 (Proposed Project)		Net Change from Existing	
	City+SOI		City+SOI		TOTAL	
Transportation	87,892	17%	118,138	15%	30,246	12%
Energy - Electricity	16,359	3%	29,432	4%	13,073	5%
Energy - Natural Gas	43,761	9%	74,930	10%	31,169	12%
Solid Waste (Waste Commitment)	9,065	2%	16,470	2%	7,405	3%
Water/Wastewater	1,007	0%	461	0%	-545	0%
Other - Offroad Construction Equipment	133,124	26%	134,569	18%	1,445	1%
Other - Commercial and Light Industrial	2,345	0%	6,542	1%	4,196	2%
Other - Lawn and Garden Equipment	201,878	40%	359,723	47%	157,844	63%
Refrigerants	14,865	3%	22,396	3%	7,531	3%
<b>Total Community Emissions</b>	<b>510,296</b>	100%	<b>762,661</b>	100%	<b>252,365</b>	100%
Service Population (SP)	51,610	NA	93,770	NA	42,160	NA
MTCO <sub>2</sub> e/SP	9.9	NA	8.1	NA	-1.8	NA

Notes: Emissions may not total to 100 percent due to rounding. Based on GWPs in the IPCC Fifth Assessment Report (AR5).

The emissions inventory and forecast is based on activity data for the City of San Mateo. This emissions inventory methodology identifies GHG emissions produced within a jurisdiction and captures direct and indirect emissions generated by land uses in a community. The activity data methodology allows a direct comparison between a community's GHG emissions and that identified by CARB in the AB 32 and SB 32 inventory and forecast prepared for the scoping plan. Unlike a "consumption-based" GHG emissions inventory, an activity-based emissions inventory does not capture lifecycle emissions associated with consumptions of goods. While a consumption-based emissions inventory approach may document GHG emissions associated with the final demand (regardless of where the were generated), a consumption-based emissions inventory excludes emissions associated with products produced within the jurisdiction but consumed elsewhere. For these reasons, an activity-based emissions inventory was determined to be most applicable for determining significant impacts under CEQA.

Note: Excludes GHG emissions natural gas use from Permitted Sources within the City.

## Criteria Air Pollutants from Natural Gas

Rate	lbs/MBTU					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Natural Gas						
Residential	0.005	0.092	0.039	0.001	0.007	0.007
Non-Residential	0.005	0.098	0.082	0.001	0.007	0.007

Sources CalEEMod Version 2022.1, 2022, Appendix C. [https://www.caleemod.com/documents/handbook/appendices/appendix\\_c.pdf](https://www.caleemod.com/documents/handbook/appendices/appendix_c.pdf)

City + SOI	Existing 2024	Year 2045
Therms		
Residential	5,695,217	9,267,085
Nonresidential	2,527,969	4,813,053
Total	8,223,187	14,080,138

City + SOI						
Natural Gas	2024 lbs/day - City + SOI					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Residential	8	144	61	2	11	11
Nonresidential	3	68	57	1	5	5
TOTAL	11	211	118	2	16	16

Natural Gas	Year 2045 Update lbs/day - City + SOI					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Residential	13	234	99	3	18	18
Nonresidential	7	129	108	1	9	9
TOTAL	19	363	207	4	27	27

Energy Data - PCE and PG&E

ELECTRICITY DATA (kWh/Year)						
Peninsula Clean Energy (PCE). July 1, 2024. Electricity Use in San Carlos (2019-2023).						
Pacific Gas & Electric (PG&E). August 21, 2024. Electricity Use in San Carlos (2019-2023).						
Category	2019	2020	2021	2022	2023	5-Year Average
Nonresidential	114,182	103,015	107,525	110,718	108,541	108,796
Residential	66,815	72,256	65,606	64,123	62,739	66,308
Total MWh	180,997	175,271	173,131	174,841	171,280	175,104
Residential						
PG&E Proportion of Total	2%	2%	2%	2%	2%	2%
PCE Proportion of Total	98%	98%	98%	98%	98%	98%
Nonresidential						
PG&E Proportion of Total	0%	0%	0%	0%	0%	0%
PCE Proportion of Total	100%	100%	100%	100%	100%	100%
NATURAL GAS DATA (US Therms/Year)						
Pacific Gas & Electric (PG&E). August 21, 2024. Natural Gas Use in San Carlos (2019-2023).						
Excludes natural gas use from Industrial (Permitted) Sources within the City.						
Category	2019	2020	2021	2022	2023	5-Year Average
Nonresidential	3,564,555	113,889	3,167,573	2,849,302	2,944,528	2,527,969
Residential	5,831,987	5,699,545	5,639,012	5,534,808	5,770,734	5,695,217
Total Therms	9,396,542	5,813,434	8,806,585	8,384,110	8,715,262	8,223,187

City of San Carlos

Energy Emission Factors - Power and Heating Fuels				
Pacific Gas & Electric (Natural Gas)	lbs/MMBTU	lbs/MMBTU	lbs/MMBTU	lbs/MMBTU
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
All Years	117	0.01	0.00	117.321
	MT/Therm	MT/Therm	MT/Therm	MT/Therm
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
All Years	0.0053	0.0000	0.0000	0.005
Source: California Air Pollution Control Officer's Association (CAPCOA). 2022, April. California Emissions Estimator Model (CalEEMod) User's Guide Version 2022.1. <a href="https://www.caleemod.com/user-guide">https://www.caleemod.com/user-guide</a> , Table G-4, Natural Gas Emissions Factors (pounds per MMBTU).				

Peninsula Clean Energy & PG&E (Electricity)				
Intensity factor				CO <sub>2</sub> e
	CO <sub>2</sub> lbs/MWH <sup>1</sup>	CH <sub>4</sub> lbs/MWH <sup>2</sup>	N <sub>2</sub> O lbs/MWH <sup>2</sup>	lbs/MWh
PG&E 2024	203.983	0.033	0.004	205.967
PG&E 2045	203.983	0.033	0.004	205.967
PCE 2024	9.000	0.033	0.004	10.984
PCE 2045	0.000	0.000	0.000	0.000
Proportionally Weighted Between PG&E and PCE Usage				
Residential 2024	13.309	0.033	0.004	15.293
Nonresidential 2024	9.007	0.033	0.004	10.991
Residential 2045	4.508	0.001	0.000	4.552
Nonresidential 2045	0.007	0.000	0.000	0.007
Intensity Factors				CO <sub>2</sub> e
	CO <sub>2</sub> MTons/MWH <sup>1</sup>	CH <sub>4</sub> MTons/MWH <sup>2</sup>	N <sub>2</sub> O MTons/MWH <sup>2</sup>	MTons/MWh
Residential 2024	0.0925	0.0000	0.0000	0.093
Nonresidential 2024	0.0925	0.0000	0.0000	0.093
Residential 2045	0.0041	0.0000	0.0000	0.005
Nonresidential 2045	0.0000	0.0000	0.0000	0.000
Source: California Air Pollution Control Officer's Association (CAPCOA). 2022, April. California Emissions Estimator Model (CalEEMod) User's Guide Version 2022.1. <a href="https://www.caleemod.com/user-guide">https://www.caleemod.com/user-guide</a> , Table G-3, Electricity Utility Greenhouse Gas Emissions Factors; Peninsula Clean Energy (PCE). 2024, August 1. Email correspondence with Justin Pine.				

Notes

In 2018, SB 100 (de León, 2018) was signed into law, which increased the RPS to 60% by 2030 and mandates the state's electricity to come from 100% carbon-free resources by 2045.

GHG Emissions from Energy Use

Actual Energy Use	Electricity	Natural Gas
	MWH/YR	Therms/YR
	Average	Average
Nonresidential	108,796	2,527,969
Residential	66,308	5,695,217
City Total	175,104	8,223,187
Year 2024	MTCO2e/Yr	
Nonresidential	10,164	13,453
Residential	6,195	30,308
City Total 2024	16,359	43,761
Year 2045 (adjusted for future carbon intensity)		
Nonresidential	10,164	13,453
Residential	6,195	30,308
City Total 2045	16,359	43,761

Forecast Methodology	Existing	Proposed Project
Nonresidential - Square footage	9,876,200	18,803,500
Residential - Dwelling Units	13,250	21,560

MWH per SQFT per year (2045)	0.01	Therms per SQFT per year	0.26
MWH per Unit per year (2045)	5.00	Therms per Unit per year	429.83

Electricity	Existing	Proposed Project
	MWH	
Nonresidential	108,796	207,139
Residential	66,308	107,894
Total	175,104	315,034
Electricity	MTCO2e	
Nonresidential	10,164	19,352
Residential	6,195	10,080
Total Electricity Emissions	16,359	29,432

Natural Gas	Existing	Proposed Project
	Therms	
Nonresidential	2,527,969	4,813,053
Residential	5,695,217	9,267,085
Total	8,223,187	14,080,138
Natural Gas	MTCO2e	
Nonresidential	13,453	25,613
Residential	30,308	49,316
Total Natural Gas Emissions	43,761	74,930

Water and Wastewater

Water Demand for San Carlos Provided by Mid-Peninsula Water District (MPWD), California Water Service (CalWater), and Redwood City Water Division

Water				Wastewater			
	Residential	Existing	Proposed Project		Residential	Existing	Proposed Project
	Acre Feet Per Year (AFY)	2,561	3,495		Million Gallons Per Day (MGD)	1.31	2.04
	MGY TOTAL	835	1,139		AFY	1,465	2,287
					MGY TOTAL	477	745
	Nonresidential	Existing	Proposed Project		Nonresidential	Existing	Proposed Project
	Acre Feet Per Year (AFY)	1,320	3,209		Million Gallons Per Day (MGD)	1.54	2.41
	MGY TOTAL	430	1,046		AFY	1,728	2,698
					MGY TOTAL	563	879

Notes:

<sup>1</sup> Calculated existing water and wastewater demands based on proportion of net new water demand for each purveyors and existing demographics for EIR Study Area since the delineation of residential and non-residential uses are not known under each purveyor service area for existing conditions. Accounts for distribution system losses.

<sup>2</sup> Increase in water and wastewater demand based on growth in housing units and non-residential square footage. Accounts for distribution system losses.

Direct Emissions from Wastewater Treatment

Wastewater Treatment Type	BIOGENIC CO <sub>2</sub>			
	MT/Gallon	CH <sub>4</sub> MT/Gallon	N <sub>2</sub> O MT/Gallon	Non-Biogenic CO <sub>2</sub> e MT/Gallon
Aerobic	3.90E-07	1.34E-09	8.52E-10	2.63E-07
Anaerobic (Facultative Lagoons)	3.90E-07	4.01E-07	8.52E-10	1.15E-05
Septic	0.00E+00	2.50E-07	8.52E-10	7.23E-06

Source: California Air Pollution Control Officer's Association (CAPCOA). 2022, April. California Emissions Estimator Model (CalEEMod) User's Guide Version 2022.1. <https://www.caleemod.com/user-guide>. Table G-35, Annual Wastewater Treatment Direct Emission Factors (short ton per gallon)

Anaerobic	Existing	Proposed Project
Residential Non-Biogenic MT CO <sub>2</sub> e TOTAL=	126	196
Nonresidential Non-Biogenic MT CO <sub>2</sub> e TOTAL=	148	231

Water and Wastewater

Energy for Water Conveyance, Treatment, Distribution, and Wastewater Treatment

Location	Supply (Water Conveyance)	Water Treatment	Water Distribution	Total Water	Wastewater Treatment
	kWhr/million gallons				
South Coast	3,044	725	1,537	5,306	1,501
San Francisco Bay	1,182	754	2,998	4,934	1,542
Central Coast	1,577	754	1,537	3,868	1,542
Tulare Lake	1,506	748	166	2,420	1,519
North Coast	620	754	1,537	2,911	1,542
San Joaquin River	827	748	166	1,741	1,519
Colorado River	2,304	748	166	3,218	1,519
Sacramento River	698	748	166	1,612	1,519
South Lahontan	1,953	748	1,537	4,238	1,519
North Lahontan	541	748	166	1,455	1,519

Source: California Air Pollution Control Officer's Association (CAPCOA). 2022, April. California Emissions Estimator Model (CalEEMod) User's Guide Version 2022.1. <https://www.caleemod.com/user-guide>, Table G-32, Water Energy Intensity Factors by Hydrologic Region and Process (kWh per million gallon).

Proportionally Weighted Between PG&E and PCE Usage				
Intensity factor				CO <sub>2</sub> e
	CO <sub>2</sub> lbs/MWH <sup>1</sup>	CH <sub>4</sub> lbs/MWH <sup>2</sup>	N <sub>2</sub> O lbs/MWH <sup>2</sup>	lbs/MWh
Residential 2024	13.309	0.033	0.004	15.293
Nonresidential 2024	9.007	0.033	0.004	10.991
Residential 2045	4.508	0.001	0.000	4.552
Nonresidential 2045	0.007	0.000	0.000	0.007
Intensity factor				CO <sub>2</sub> e
	CO <sub>2</sub> MTons/MWH <sup>1</sup>	CH <sub>4</sub> MTons/MWH <sup>2</sup>	N <sub>2</sub> O MTons/MWH <sup>2</sup>	MTons/MWh
Residential 2024	0.0925	0.000	0.000	0.093
Nonresidential 2024	0.0925	0.000	0.000	0.093
Residential 2045	0.0041	0.000	0.000	0.005
Nonresidential 2045	0.0000	0.000	0.000	0.000

Source: California Air Pollution Control Officer's Association (CAPCOA). 2022, April. California Emissions Estimator Model (CalEEMod) User's Guide Version 2022.1. <https://www.caleemod.com/user-guide>, Table G-3, Electricity Utility Greenhouse Gas Emissions Factors, Peninsula Clean Energy (PCE). 2024, August 1. Email correspondence with Justin Pine.



Water and Wastewater

GHG Emissions from Energy Associated with Water/Wastewater

Energy Associated with Water Use	Existing Mwh	Proposed Project Mwh
Residential Water Use	4,118	5,619
Residential Wastewater Generation	736	1,149
Nonresidential Water Use	2,122	5,159
Nonresidential Wastewater Generation	868	1,355
Total Water/Wastewater	7,844	13,282

GHG Emissions from Energy Associated with Water Use/Wastewater Generation	Existing MTCO <sub>2</sub> e	Proposed Project MTCO <sub>2</sub> e
Residential Water Use	385	28
Residential Wastewater Generation	69	6
Nonresidential Water Use	198	0
Nonresidential Wastewater Generation	81	0
Total Water/Wastewater	733	34

Total GHGs

GHG Emissions from Water/Wastewater Use	Existing MTCO <sub>2</sub> e	Proposed Project MTCO <sub>2</sub> e
Total Residential Water Use	385	28
Total Residential Wastewater Generation	194	202
Total Nonresidential Water Use	198	0
Total Nonresidential Wastewater Generation	229	231
Total Water/Wastewater	1,007	461

Existing Water and Wastewater Estimates

Net Change in Water Demand

Net New Buildout in Mid Peninsula Water District (MPWD)		Proportion	Net New Buildout in CalWater Service Area		Proportion	Net New Buildout in Redwood City Water Division Area		Proportion
Total Housing Units	1,531	18.45%	Total Housing Units	6,769	81.55%	Total Housing Units	0	0.00%
Single-Family	0	0.00%	Single-Family	40	100.00%	Single-Family	0	0.00%
Multi-Family and ADUs	1,531	18.45%	Multi-Family and ADUs	6,729	81.45%	Multi-Family and ADUs	0	0.00%

Net New Non-Residential Square Footage	4,672,081	52.33%	Net New Non-Residential Square Footage	4,255,219	47.67%	Net New Non-Residential Square Footage	0	0.00%
Commercial	75,378	13.67%	Commercial	626,878	113.67%	Commercial	0	0.00%
Office	158,440	46.10%	Office	185,260	53.90%	Office	0	0.00%
R&D	3,154,263	37.21%	R&D	5,322,337	62.79%	R&D	0	0.00%
Industrial	1,284,000	194.99%	Industrial	625,500	94.99%	Industrial	0	0.00%

Mid Peninsula Water District Water Use Factors		
	Factor	Unit
Multi-Family	1.09	GPD/OU
Commercial	0.043	GPD/SF
Office	0.043	GPD/SF
R&D	0.18	GPD/SF
Industrial	0.02	GPD/SF

CalWater Water Use Factors		
	Factor	Unit
Single-Family	1.07	GPD/OU
Multi-Family	.99	GPD/OU
Commercial	0.097	GPD/SF
Office	0.093	GPD/SF
R&D	0.18	GPD/SF
Industrial	0.097	GPD/SF

Existing Water Demand

Existing (2024)	Total Amount	MPWD Proportion	CalWater Proportion	GPD	AFY
Total Housing Units	13,490	708	12,782		
Single-Family	3,670	0	3,670	1,904,090	2,133.9
Multi-Family and ADUs	3,820	708	3,112	381,720	427.6
				Total Residential Water Demand	2,561.4

Existing (2024)	Total Amount	MPWD Proportion	CalWater Proportion	GPD	AFY
Total Non-Residential Square Footage	12,564,000	11,638,477	928,523		
Commercial	772,800	105,625	878,425	80,454	90.1
Office	1,462,500	674,188	788,312	73,696	82.5
R&D	5,747,900	2,138,875	3,609,025	1,934,432	2,158.9
Industrial	4,580,800	8,932,038	4,351,238	225,565	252.7
				Subtotal Non-Residential Water Demand	1,078.9
				Irrigation Demand for Non-Residential	107.9
				Total Non-Residential Water Demand	1,186.8
				Distribution System Losses	133.1
				TOTAL Existing Water Demand	3,881

Net New Wastewater Demand

	Amount	Wastewater Demand Factor(gpd or gpd/sf)	GPD	MGD	Proportion
Net New Residential Population	15,620	47	734,140	0.73	45.88%
Net New Non-Residential Square Footage	8,927,300	0.097	865,948	0.87	54.12%
			Total Net New Wastewater Demand	1.60	

Existing Wastewater Demand	2.85 MGD
Residential	1.31
Nonresidential	1.54
Increase in Wastewater Demand	1.60 MGD
Residential	0.73
Nonresidential	0.87
Wastewater Demand at Buildout	4.45 MGD

Notes:

1. Calculated existing water and wastewater demands based on proportion of net new water demand for each purveyor and existing demographics for EIR Study Area since the delineation of residential and non-residential uses are not known under each purveyor service area for existing conditions. Accounts for distribution system losses.

Solid Waste Disposal

Source: CalRecycle Recycling and Disposal Reporting System Report (Overall Jurisdiction Tons For Disposal and Disposal Related Uses)

Waste Generated Within San Carlos

Year	Landfill (tons)
2022	36,948
2023	42,419
Total	79,366
Annual Average	39,683

Service Population in San Carlos

Proposed GP		
Existing 2024	2045	% Increase
51,610	93,770	82%

Notes:

Source: CalRecycle. 2024, October 15 (accessed). RDRS Report 1: Overall Jurisdiction Tons for Disposal and Disposal Related Uses. <https://www2.calrecycle.ca.gov/RecyclingDisposalReporting/Reports/OverallJurisdictionTonsForDisposal>

CARB's Landfill Emission Tool (version 1.09.24.2021) CH<sub>4</sub> Model Results

Based on the West Central Landfill (San Mateo County) K-Value

	EXISTING			Proposed Project
	CH <sub>4</sub> Tons	CARB MTCO <sub>2</sub> e w/LFG Capture	2024 Disposal (ARS GWPs)*	
	2024 TOTAL	2024 TOTAL	2024 TOTAL	
Year 1	108	24	33	59
Year 2	748	170	226	411
Year 3 (PEAK)	840	190	254	461
Year 4	823	187	249	452
Year 5	807	183	244	443
Year 6	791	179	239	435
Year 7	775	176	234	426
Year 8	760	172	230	418
Year 9	745	169	225	409
Year 10	730	166	221	401
Year 11	716	162	216	393
Year 12	702	159	212	385
Year 13	688	156	208	378
Year 14	674	153	204	370
Year 15	661	150	200	363
Year 16	648	147	196	356
Year 17	635	144	192	349
Year 18	622	141	188	342
Year 19	610	138	184	335
Year 20	598	136	181	328
Year 21	586	133	177	322
Year 22	574	130	174	316
Year 23	563	128	170	309
Year 24	552	125	167	303
Year 25	541	123	164	297
Year 26	530	120	160	291
Year 27	520	118	157	286
Year 28	509	116	154	280
Year 29	499	113	151	274
Year 30	489	111	148	269
Year 31	480	109	145	264
Year 32	470	107	142	258
Year 33	461	105	139	253
Year 34	452	102	137	248
Year 35	443	100	134	243
Year 36	434	98	131	239
Year 37	426	97	129	234
Year 38	417	95	126	229
Year 39	409	93	124	225
Year 40	401	91	121	220
Year 41	393	89	119	216
Year 42	385	87	116	212
Year 43	377	86	114	207
Year 44	370	84	112	203
Year 45	363	82	110	199
Year 46	355	81	107	195

Year 47	348	79	105	191
Year 48	341	77	103	188
Year 49	335	76	101	184
Year 50	328	74	99	180
Year 51	322	73	97	177
Year 52	315	71	95	173
Year 53	309	70	93	170
Year 54	303	69	92	166
Year 55	297	67	90	163
Year 56	291	66	88	160
Year 57	285	65	86	157
Year 58	280	63	85	154
Year 59	274	62	83	151
Year 60	269	61	81	148
Total	29,976	6,799	9,065	16,470

Waste, Landfill Emissions Tool Version 1.09.24.2021, and data from CalRecycle. Biogenic CO<sub>2</sub> emissions are not included.

Notes

LFG capture Efficiency 0.75 AR5 CH<sub>4</sub> GWP 28 SAR GWP CH<sub>4</sub>:<sup>a</sup> 21 Tons to metric Tons 0.9071847

Waste generation based on two year average waste commitment for San Carlos obtained from CalRecycle.

Significant CH<sub>4</sub> production typically begins one or two years after waste disposal in a landfill and continues for 10 to 60 years or longer. Consequently, the highest CH<sub>4</sub> emissions from waste disposal in a given year are reported.

Decomposition based on an average annual rainfall of approximately 44 inches per year average (anaerobic decomposition factor (k) of 0.057) for Shasta County.

The Landfill Gas Estimator only includes the landfill gas (LFG) capture in the landfill gas heat output and therefore the reduction and emissions from landfill gas capture are calculated separately. Assumes 75 percent of fugitive GHG emissions are captured within the landfill's Landfill Gas Capture System with a landfill gas capture efficiency of 75 percent. The Landfill gas capture efficiency is based on the California Air Resources Board's (CARB) Local Government Operations Protocol (LGOP), Version 1.3.

Biogenic CO<sub>2</sub> emissions are not included.

## Refrigerants

Refrigerants	MTCO <sub>2</sub> e	
<b>2021 Statewide Refrigerant Use (AR4)</b>	MTCO <sub>2</sub> e	19,023,805
<b>US Census 2021 California Population</b>	People	39,455,353
	MT/person	0.48

	Existing	Proposed Project
<b>Population</b>	30,830	46,450
<b>MTCO<sub>2</sub>e</b>	14,865	22,396

Source: CARB. Greenhouse Gas Emissions Inventory Query Tool for years 2000 to 2020 (15th Edition) - Query Results. Main Activity: Use of substitutes for ozone depleting substances Activity Subset: Refrigeration and Air Conditioning. AR 4.  
<https://ww2.arb.ca.gov/applications/greenhouse-gas-emission-inventory-0>

U.S. Census Bureau. 2023. Table DP05 2021: ACS 5-Year Demographics and Housing Estimates.  
<https://data.census.gov/table/ACSDP5YSPT2021.DP05?g=040XX00US06>.

Year 2024 Existing: Mobile GHG Emissions

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County

1. Based on data provided Kittelson & Associates Inc., 2024.

2. Adjusted Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the 2008 Climate Change Scoping Plan Measure Documentation Supplement.

		Pass. Vehicles	Trucks				
Fleet Mix - San Mateo County (K)		97%	3%				
Passenger Vehicles	Trucks	EMFAC default		CO2	CH4	N2O	
				AR5 GWP	AR5 GWP	AR5 GWP	
				1	28	265	
Annual VMT		268,273,728		MT/Year			
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	CO2	CH4	N2O	CO2e
All Other Buses	Diesel	0.36%	0.37%	1,141.67	0.00	0.18	1,189.36
All Other Buses	Natural Gas	0.00%	0.00%	7.44	0.01	0.00	8.01
LDA	Gasoline	40.41%	41.49%	30,158.58	0.23	0.47	30,289.85
LDA	Diesel	0.10%	0.10%	60.88	0.00	0.01	63.43
LDA	Electricity	3.74%	3.84%	0.00	0.00	0.00	0.00
LDA	Plug-in Hybrid	1.49%	1.53%	539.38	0.00	0.00	540.01
LDT1	Gasoline	3.95%	4.06%	3,454.99	0.05	0.08	3,478.45
LDT1	Diesel	0.00%	0.00%	0.55	0.00	0.00	0.57
LDT1	Electricity	0.02%	0.02%	0.00	0.00	0.00	0.00
LDT1	Plug-in Hybrid	0.01%	0.01%	3.91	0.00	0.00	3.92
LDT2	Gasoline	26.65%	27.35%	23,952.46	0.16	0.34	24,046.60
LDT2	Diesel	0.10%	0.11%	85.84	0.00	0.01	89.43
LDT2	Electricity	0.20%	0.21%	0.00	0.00	0.00	0.00
LDT2	Plug-in Hybrid	0.34%	0.35%	117.69	0.00	0.00	117.83
LHD1	Gasoline	2.18%	1.25%	2,805.90	0.02	0.02	2,811.93
LHD1	Diesel	1.04%	0.60%	1,000.65	0.01	0.16	1,042.70
LHD1	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00
LHD2	Gasoline	0.24%	0.14%	351.62	0.00	0.00	352.40
LHD2	Diesel	0.45%	0.26%	516.97	0.00	0.08	538.66
LHD2	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
MCY	Gasoline	0.42%	0.43%	214.00	0.17	0.04	229.87
MDV	Gasoline	15.31%	15.71%	16,590.06	0.11	0.22	16,650.65
MDV	Diesel	0.21%	0.21%	226.90	0.00	0.04	236.38
MDV	Electricity	0.22%	0.23%	0.00	0.00	0.00	0.00
MDV	Plug-in Hybrid	0.19%	0.19%	66.36	0.00	0.00	66.44
MH	Gasoline	0.04%	0.04%	226.30	0.00	0.00	226.99
MH	Diesel	0.02%	0.02%	59.88	0.00	0.01	62.38
Motor Coach	Diesel	0.05%	0.05%	249.07	0.00	0.04	259.48
OBUS	Gasoline	0.08%	0.08%	371.47	0.00	0.00	372.43
OBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
PTO	Diesel	0.03%	0.02%	90.88	0.00	0.01	94.68
PTO	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.02%	41.98	0.00	0.00	42.56
SBUS	Diesel	0.02%	0.02%	64.54	0.00	0.01	67.23
SBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
SBUS	Natural Gas	0.00%	0.00%	2.95	0.01	0.00	3.34
T6 CAIRP Class 4	Diesel	0.00%	0.00%	1.23	0.00	0.00	1.28
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	1.69	0.00	0.00	1.76
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	4.33	0.00	0.00	4.51
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.02%	0.01%	25.66	0.00	0.00	26.74
T6 CAIRP Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.07%	0.04%	121.67	0.00	0.02	126.77
T6 Instate Delivery Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.47	0.00	0.00	0.51
T6 Instate Delivery Class 5	Diesel	0.05%	0.03%	99.08	0.00	0.02	103.22
T6 Instate Delivery Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.31	0.00	0.00	0.33

Year 2024 Existing: Mobile GHG Emissions

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County

1. Based on data provided Kittelson & Associates Inc., 2024.

2. Adjusted Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the 2008 Climate Change Scoping Plan Measure Documentation Supplement.

		Pass. Vehicles	Trucks				
Fleet Mix - San Mateo County (K)		97%	3%				
Passenger Vehicles		Trucks	EMFAC default	CO2	CH4	N2O	
	94%	6%		AR5 GWP	AR5 GWP	AR5 GWP	
				1	28	265	
Annual VMT		268,273,728		MT/Year			
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	CO2	CH4	N2O	CO2e
T6 Instate Delivery Class 6	Diesel	0.11%	0.07%	204.96	0.00	0.03	213.52
T6 Instate Delivery Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.65	0.00	0.00	0.70
T6 Instate Delivery Class 7	Diesel	0.04%	0.03%	79.63	0.00	0.01	82.95
T6 Instate Delivery Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	1.86	0.00	0.00	1.99
T6 Instate Other Class 4	Diesel	0.09%	0.05%	160.52	0.00	0.03	167.24
T6 Instate Other Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.48	0.00	0.00	0.51
T6 Instate Other Class 5	Diesel	0.24%	0.14%	417.76	0.00	0.07	435.21
T6 Instate Other Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.93	0.00	0.00	1.00
T6 Instate Other Class 6	Diesel	0.15%	0.09%	261.77	0.00	0.04	272.71
T6 Instate Other Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.60	0.00	0.00	0.65
T6 Instate Other Class 7	Diesel	0.07%	0.04%	120.23	0.00	0.02	125.25
T6 Instate Other Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	2.56	0.00	0.00	2.75
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	5.29	0.00	0.00	5.51
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.01	0.00	0.00	0.01
T6 Instate Tractor Class 7	Diesel	0.02%	0.01%	33.60	0.00	0.01	35.01
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.56	0.00	0.00	0.60
T6 OOS Class 4	Diesel	0.00%	0.00%	0.69	0.00	0.00	0.72
T6 OOS Class 5	Diesel	0.00%	0.00%	0.95	0.00	0.00	0.99
T6 OOS Class 6	Diesel	0.00%	0.00%	2.42	0.00	0.00	2.52
T6 OOS Class 7	Diesel	0.01%	0.01%	16.59	0.00	0.00	17.28
T6 Public Class 4	Diesel	0.01%	0.00%	12.04	0.00	0.00	12.54
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.44	0.00	0.00	0.47
T6 Public Class 5	Diesel	0.02%	0.01%	38.96	0.00	0.01	40.58
T6 Public Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Public Class 5	Natural Gas	0.00%	0.00%	2.97	0.00	0.00	3.20
T6 Public Class 6	Diesel	0.01%	0.01%	23.87	0.00	0.00	24.87
T6 Public Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.96	0.00	0.00	1.03
T6 Public Class 7	Diesel	0.03%	0.02%	65.62	0.00	0.01	68.37
T6 Public Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Public Class 7	Natural Gas	0.00%	0.00%	3.38	0.00	0.00	3.64
T6 Utility Class 5	Diesel	0.00%	0.00%	3.12	0.00	0.00	3.25
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.04	0.00	0.00	0.04
T6 Utility Class 6	Diesel	0.00%	0.00%	0.59	0.00	0.00	0.61
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.01	0.00	0.00	0.01
T6 Utility Class 7	Diesel	0.00%	0.00%	0.81	0.00	0.00	0.85
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.01	0.00	0.00	0.01
T6TS	Gasoline	0.25%	0.15%	682.59	0.00	0.01	684.83

Year 2024 Existing: Mobile GHG Emissions

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County

1. Based on data provided Kittelson & Associates Inc., 2024.

2. Adjusted Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the 2008 Climate Change Scoping Plan Measure Documentation Supplement.

		Pass. Vehicles	Trucks				
Fleet Mix - San Mateo County (K)		97%	3%				
Passenger Vehicles	Trucks	EMFAC default		CO2	CH4	N2O	
				AR5 GWP	AR5 GWP	AR5 GWP	
				1	28	265	
Annual VMT		268,273,728		MT/Year			
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	CO2	CH4	N2O	CO2e
T6TS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 CAIRP Class 8	Diesel	0.09%	0.05%	220.76	0.00	0.03	229.98
T7 CAIRP Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.38	0.00	0.00	0.40
T7 NNOOS Class 8	Diesel	0.11%	0.06%	261.00	0.00	0.04	271.90
T7 NOOS Class 8	Diesel	0.04%	0.02%	95.32	0.00	0.02	99.30
T7 Other Port Class 8	Diesel	0.01%	0.01%	22.60	0.00	0.00	23.55
T7 Other Port Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 POAK Class 8	Diesel	0.03%	0.02%	78.03	0.00	0.01	81.29
T7 POAK Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.03	0.00	0.00	0.03
T7 Public Class 8	Diesel	0.08%	0.05%	225.51	0.00	0.04	234.94
T7 Public Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 Public Class 8	Natural Gas	0.00%	0.00%	1.04	0.00	0.00	1.13
T7 Single Concrete/Transit Mix Class 8	Diesel	0.02%	0.01%	47.42	0.00	0.01	49.40
T7 Single Concrete/Transit Mix Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Natural Gas	0.00%	0.00%	2.10	0.00	0.00	2.27
T7 Single Dump Class 8	Diesel	0.06%	0.03%	146.45	0.00	0.02	152.57
T7 Single Dump Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	6.21	0.01	0.00	6.68
T7 Single Other Class 8	Diesel	0.06%	0.03%	151.14	0.00	0.02	157.45
T7 Single Other Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 Single Other Class 8	Natural Gas	0.00%	0.00%	7.82	0.01	0.00	8.43
T7 SWCV Class 8	Diesel	0.05%	0.03%	289.07	0.00	0.05	301.15
T7 SWCV Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 SWCV Class 8	Natural Gas	0.04%	0.02%	104.18	0.26	0.02	117.02
T7 Tractor Class 8	Diesel	0.08%	0.04%	180.94	0.00	0.03	188.50
T7 Tractor Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 Tractor Class 8	Natural Gas	0.01%	0.01%	18.38	0.02	0.00	19.80
T7 Utility Class 8	Diesel	0.00%	0.00%	3.88	0.00	0.00	4.04
T7 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7IS	Gasoline	0.00%	0.00%	10.68	0.00	0.00	10.89
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.02%	62.53	0.00	0.00	62.61
UBUS	Diesel	0.12%	0.12%	392.42	0.00	0.06	408.84
UBUS	Electricity	0.02%	0.02%	0.00	0.00	0.00	0.00
UBUS	Natural Gas	0.02%	0.03%	85.11	0.28	0.02	97.45
		100%	100%	87,217.81	1.35	2.40	87,892



Year 2045 Existing: Mobile GHG Emissions

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County  
1. Based on data provided Kittelson & Associates Inc., 2024.  
2. Adjusted Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the 2008 Climate Change Scoping Plan Measure Documentation Supplement.

		Pass. Vehicles	Trucks				
Fleet Mix - San Mateo County (K)		97%	3%				
Passenger Vehicles	Trucks	EMFAC default		CO2	CH4	N2O	
92%	8%			AR5 GWP	AR5 GWP	AR5 GWP	
				1	28	265	
Annual VMT		463,300,638		MT/Year			
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	CO2	CH4	N2O	CO2e
All Other Buses	Diesel	0.35%	0.36%	1,715.16	0.00	0.27	1,786.79
All Other Buses	Natural Gas	0.01%	0.01%	29.21	0.03	0.01	31.57
LDA	Gasoline	29.09%	30.40%	31,291.00	0.12	0.40	31,401.77
LDA	Diesel	0.02%	0.02%	14.98	0.00	0.00	15.60
LDA	Electricity	4.45%	4.65%	0.00	0.00	0.00	0.00
LDA	Plug-in Hybrid	1.40%	1.46%	752.73	0.00	0.00	753.49
LDT1	Gasoline	3.56%	3.72%	4,432.87	0.02	0.05	4,447.22
LDT1	Diesel	0.00%	0.00%	0.07	0.00	0.00	0.07
LDT1	Electricity	0.13%	0.13%	0.00	0.00	0.00	0.00
LDT1	Plug-in Hybrid	0.09%	0.09%	46.56	0.00	0.00	46.61
LDT2	Gasoline	30.93%	32.32%	40,056.20	0.18	0.47	40,185.20
LDT2	Diesel	0.12%	0.12%	142.37	0.00	0.02	148.33
LDT2	Electricity	0.97%	1.01%	0.00	0.00	0.00	0.00
LDT2	Plug-in Hybrid	0.85%	0.89%	458.46	0.00	0.00	458.92
LHD1	Gasoline	1.37%	0.62%	2,124.81	0.00	0.00	2,125.89
LHD1	Diesel	0.86%	0.39%	1,071.06	0.01	0.17	1,115.98
LHD1	Electricity	1.83%	0.82%	0.00	0.00	0.00	0.00
LHD2	Gasoline	0.16%	0.07%	270.68	0.00	0.00	270.85
LHD2	Diesel	0.40%	0.18%	574.07	0.00	0.09	598.14
LHD2	Electricity	0.44%	0.20%	0.00	0.00	0.00	0.00
MCY	Gasoline	0.48%	0.50%	427.83	0.29	0.08	457.08
MDV	Gasoline	17.99%	18.80%	28,229.90	0.11	0.28	28,306.72
MDV	Diesel	0.19%	0.20%	303.15	0.00	0.05	315.82
MDV	Electricity	0.88%	0.92%	0.00	0.00	0.00	0.00
MDV	Plug-in Hybrid	0.55%	0.57%	293.23	0.00	0.00	293.53
MH	Gasoline	0.05%	0.05%	491.45	0.00	0.00	492.69
MH	Diesel	0.03%	0.03%	148.78	0.00	0.02	155.01
Motor Coach	Diesel	0.05%	0.06%	394.40	0.00	0.06	410.87
OBUS	Gasoline	0.02%	0.03%	180.84	0.00	0.00	181.28
OBUS	Electricity	0.03%	0.03%	0.00	0.00	0.00	0.00
PTO	Diesel	0.02%	0.01%	67.45	0.00	0.01	70.27
PTO	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.02%	67.36	0.00	0.00	67.58
SBUS	Diesel	0.01%	0.01%	55.48	0.00	0.01	57.80
SBUS	Electricity	0.02%	0.02%	0.00	0.00	0.00	0.00
SBUS	Natural Gas	0.00%	0.00%	3.66	0.01	0.00	4.10
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.83	0.00	0.00	0.86
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	1.14	0.00	0.00	1.18
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	2.95	0.00	0.00	3.07
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.02%	0.01%	29.86	0.00	0.00	31.10
T6 CAIRP Class 7	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.04%	0.02%	92.98	0.00	0.01	96.87
T6 Instate Delivery Class 4	Electricity	0.05%	0.02%	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	1.21	0.00	0.00	1.30
T6 Instate Delivery Class 5	Diesel	0.03%	0.02%	75.86	0.00	0.01	79.03
T6 Instate Delivery Class 5	Electricity	0.04%	0.02%	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.95	0.00	0.00	1.03

Year 2045 Existing: Mobile GHG Emissions

Source: EMFAC2021 Version 1.0.2. PL Emission Rates. San Mateo County  
1. Based on data provided Kittelson & Associates Inc., 2024.  
2. Adjusted Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the 2008 Climate Change Scoping Plan Measure Documentation Supplement.

		Pass. Vehicles	Trucks				
Fleet Mix - San Mateo County (K)		97%	3%				
Passenger Vehicles	Trucks	EMFAC default		CO2	CH4	N2O	
92%	8%			AR5 GWP	AR5 GWP	AR5 GWP	
				1	28	265	
Annual VMT		463,300,638		MT/Year			
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	CO2	CH4	N2O	CO2e
T6 Instate Delivery Class 6	Diesel	0.07%	0.03%	157.21	0.00	0.02	163.78
T6 Instate Delivery Class 6	Electricity	0.08%	0.03%	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	2.00	0.00	0.00	2.16
T6 Instate Delivery Class 7	Diesel	0.04%	0.02%	84.05	0.00	0.01	87.56
T6 Instate Delivery Class 7	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	1.81	0.00	0.00	1.95
T6 Instate Other Class 4	Diesel	0.06%	0.03%	119.48	0.00	0.02	124.47
T6 Instate Other Class 4	Electricity	0.06%	0.03%	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	1.42	0.00	0.00	1.52
T6 Instate Other Class 5	Diesel	0.15%	0.07%	307.78	0.00	0.05	320.63
T6 Instate Other Class 5	Electricity	0.17%	0.07%	0.00	0.00	0.00	0.00
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	3.57	0.00	0.00	3.84
T6 Instate Other Class 6	Diesel	0.09%	0.04%	194.25	0.00	0.03	202.36
T6 Instate Other Class 6	Electricity	0.10%	0.05%	0.00	0.00	0.00	0.00
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	2.26	0.00	0.00	2.43
T6 Instate Other Class 7	Diesel	0.05%	0.02%	116.23	0.00	0.02	121.09
T6 Instate Other Class 7	Electricity	0.04%	0.02%	0.00	0.00	0.00	0.00
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	2.15	0.00	0.00	2.31
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	3.72	0.00	0.00	3.88
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.04	0.00	0.00	0.05
T6 Instate Tractor Class 7	Diesel	0.02%	0.01%	43.09	0.00	0.01	44.89
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.78	0.00	0.00	0.84
T6 OOS Class 4	Diesel	0.00%	0.00%	1.04	0.00	0.00	1.08
T6 OOS Class 5	Diesel	0.00%	0.00%	1.42	0.00	0.00	1.48
T6 OOS Class 6	Diesel	0.00%	0.00%	3.71	0.00	0.00	3.87
T6 OOS Class 7	Diesel	0.01%	0.01%	24.32	0.00	0.00	25.34
T6 Public Class 4	Diesel	0.00%	0.00%	7.61	0.00	0.00	7.93
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.49	0.00	0.00	0.53
T6 Public Class 5	Diesel	0.01%	0.01%	26.25	0.00	0.00	27.35
T6 Public Class 5	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00
T6 Public Class 5	Natural Gas	0.00%	0.00%	1.91	0.00	0.00	2.06
T6 Public Class 6	Diesel	0.01%	0.00%	15.34	0.00	0.00	15.98
T6 Public Class 6	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00
T6 Public Class 6	Natural Gas	0.00%	0.00%	1.00	0.00	0.00	1.08
T6 Public Class 7	Diesel	0.02%	0.01%	45.38	0.00	0.01	47.27
T6 Public Class 7	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00
T6 Public Class 7	Natural Gas	0.00%	0.00%	3.17	0.00	0.00	3.43
T6 Utility Class 5	Diesel	0.00%	0.00%	1.61	0.00	0.00	1.68
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.01	0.00	0.00	0.01
T6 Utility Class 6	Diesel	0.00%	0.00%	0.30	0.00	0.00	0.32
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.42	0.00	0.00	0.43
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.14%	0.06%	452.26	0.00	0.00	452.80

Year 2045 Existing: Mobile GHG Emissions

Source: EMFAC2021 Version 1.0.2. PL Emission Rates, San Mateo County

1. Based on data provided Kittelson & Associates Inc., 2024.

2. Adjusted Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the 2008 Climate Change Scoping Plan Measure Documentation Supplement.

		Pass. Vehicles	Trucks				
Fleet Mix - San Mateo County (K)		97%	3%				
Passenger Vehicles	Trucks	EMFAC default		CO2	CH4	N2O	
		92%	8%	AR5 GWP	AR5 GWP	AR5 GWP	
				1	28	265	
Annual VMT		463,300,638		MT/Year			
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	CO2	CH4	N2O	CO2e
T6TS	Electricity	0.16%	0.07%	0.00	0.00	0.00	0.00
T7 CAIRP Class 8	Diesel	0.11%	0.05%	279.33	0.00	0.04	290.99
T7 CAIRP Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.41	0.00	0.00	0.44
T7 NNOOS Class 8	Diesel	0.16%	0.07%	409.30	0.00	0.06	426.39
T7 NOOS Class 8	Diesel	0.06%	0.03%	148.63	0.00	0.02	154.84
T7 Other Port Class 8	Diesel	0.01%	0.00%	28.54	0.00	0.00	29.73
T7 Other Port Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7 POAK Class 8	Diesel	0.03%	0.02%	99.01	0.00	0.02	103.14
T7 POAK Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.19	0.00	0.00	0.20
T7 Public Class 8	Diesel	0.05%	0.02%	161.83	0.00	0.03	168.59
T7 Public Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00
T7 Public Class 8	Natural Gas	0.00%	0.00%	1.14	0.00	0.00	1.24
T7 Single Concrete/Transit Mix Class 8	Diesel	0.01%	0.00%	25.07	0.00	0.00	26.12
T7 Single Concrete/Transit Mix Class 8	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Natural Gas	0.00%	0.00%	1.20	0.00	0.00	1.29
T7 Single Dump Class 8	Diesel	0.03%	0.01%	97.40	0.00	0.02	101.46
T7 Single Dump Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	4.55	0.00	0.00	4.92
T7 Single Other Class 8	Diesel	0.05%	0.02%	146.78	0.00	0.02	152.91
T7 Single Other Class 8	Electricity	0.04%	0.02%	0.00	0.00	0.00	0.00
T7 Single Other Class 8	Natural Gas	0.00%	0.00%	7.22	0.01	0.00	7.79
T7 SWCV Class 8	Diesel	0.01%	0.00%	61.44	0.00	0.01	64.00
T7 SWCV Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00
T7 SWCV Class 8	Natural Gas	0.05%	0.02%	131.19	0.07	0.03	140.11
T7 Tractor Class 8	Diesel	0.10%	0.04%	254.79	0.00	0.04	265.43
T7 Tractor Class 8	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00
T7 Tractor Class 8	Natural Gas	0.01%	0.00%	18.73	0.02	0.00	20.23
T7 Utility Class 8	Diesel	0.00%	0.00%	2.71	0.00	0.00	2.82
T7 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
T7IS	Gasoline	0.00%	0.00%	1.96	0.00	0.00	1.99
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.02%	82.95	0.00	0.00	83.03
UBUS	Electricity	0.16%	0.16%	0.00	0.00	0.00	0.00
		100%	100%	117,440.02	0.89	2.54	118,138

Operation-Related Annual Vehicle Fuel/Energy Usage Summary

Existing Conditions (Year 2024)											
Year	VTMT	Gas Gallons	Miles/Gal	VTMT	Diesel Gallons	Miles/Gal	VTMT	CNG Gallons	Miles/Gal	VTMT	Electricity kWh
Existing Conditions	246,110,463	9,597,866	25.64	7,446,067	740,431	10.06	186,787	33,903	5.51	14,521,411	5,459,817
Total	246,119,463	9,597,866		7,446,067	740,431		186,787	33,903		14,521,411	5,459,817
No Project (Year 2045)											
Year	VTMT	Gas Gallons	Miles/Gal	VTMT	Diesel Gallons	Miles/Gal	VTMT	CNG Gallons	Miles/Gal	VTMT	Electricity kWh
No Project (Current GP)	331,223,543	10,869,241	30.47	7,376,771	633,314	11.65	153,137	21,351	7.17	38,178,425	17,499,104
Total	331,223,543	10,869,241		7,376,771	633,314		153,137	21,351		38,178,425	17,499,104
GP Update (Year 2045)											
Year	VTMT	Gas Gallons	Miles/Gal	VTMT	Diesel Gallons	Miles/Gal	VTMT	CNG Gallons	Miles/Gal	VTMT	Electricity kWh
GP Update	407,118,868	13,359,778	30.47	9,067,057	778,429	11.65	188,226	30,027	6.27	46,926,487	21,508,783
Total	407,118,868	13,359,778		9,067,057	778,429		188,226	30,027		46,926,487	21,508,783
Total Net Change											
Year	VTMT	Gas Gallons	Miles/Gal	VTMT	Diesel Gallons	Miles/Gal	VTMT	CNG Gallons	Miles/Gal	VTMT	Electricity kWh
Change from Existing Conditions	160,999,405	3,761,912	NA	1,620,990	37,999	NA	1,439	-3,876	NA	32,405,077	16,048,967
Change from No Project	75,895,325	2,490,537	NA	1,690,286	145,115	NA	35,089	8,676	NA	8,748,062	4,009,679

Notes

\* VTMT based on VTMT data provided by Kittelson & Associates, 2024.

\*\* Fuel consumption rates based on data obtained from EMFAC2021 Web Database, Version 1.0.2. <https://arb.ca.gov/emfac/emissions-inventory/f7df17ce2153322cf12c7ff31f52997df7bf7717>

\*\*\*VTMT per year based on a conversion of VTMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology. California Air Resources Board. 2008, October. Climate Change Proposed Scoping Plan: A Framework for Change.

Existing Conditions (Year 2024): Annual VMT

Vehicle type	Fleet percent	Annual VMT
LDA	46.95%	125,958,665
LDT1	4.09%	10,962,906
LDT2	28.02%	75,164,174
MDV	16.35%	43,850,235
LHD1	1.86%	4,982,881
LHD2	0.40%	1,079,147
MHD	0.71%	1,895,156
HHO	0.39%	1,056,018
OBUS	0.08%	216,769
UBUS	0.19%	507,970
MCY	0.43%	1,144,822
SBUS	0.04%	112,488
MH	0.06%	171,403
All Other Buses	0.37%	986,640
Motor Coach	0.05%	140,557
PTO	0.02%	43,697
	100.00%	268,273,728

Existing Conditions				
Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent
LDA	89.94%	0.21%	0.00%	9.85%
LDT1	99.38%	0.01%	0.00%	0.61%
LDT2	98.21%	0.36%	0.00%	1.41%
MDV	96.69%	1.30%	0.00%	2.01%
LHD1	67.29%	32.12%	0.00%	0.59%
LHD2	34.50%	64.83%	0.00%	0.67%
MHD	20.72%	78.04%	0.85%	0.38%
HHO	0.45%	90.42%	8.85%	0.28%
OBUS	99.45%	0.00%	0.00%	0.55%
UBUS	12.28%	63.13%	13.27%	11.32%
MCY	100.00%	0.00%	0.00%	0.00%
SBUS	47.27%	50.14%	2.11%	0.49%
MH	67.83%	32.17%	0.00%	0.00%
All Other Buses	0.00%	99.25%	0.75%	0.00%
Motor Coach	0.00%	100.00%	0.00%	0.00%
PTO	0.00%	99.69%	0.00%	0.31%

iv. Equal to 10. (<https://www.arb.ca.gov/msw/downloads/tenfac2014/tenfac2014-v03-technical-documentation-032015.pdf>)

vi. Equal to 10. (<https://www.arb.ca.gov/msw/downloads/tenfac2014/tenfac2014-v03-technical-documentation-032015.pdf>)

ix. CNG (<https://www.arb.ca.gov/msw/downloads/tenfac2014/tenfac2014-v03-technical-documentation-032015.pdf>)

Vehicle type	Gasoline			Diesel			CNG			Electricity		
	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	m/Wh	kWh
LDA	113,292,551	10.57	3,706,105	262,140	43.73	5,994	0	0	0	12,403,974	2.69	4,611,538
LDT1	10,894,684	26.03	418,547	1,307	24.33	54	0	0	0	66,916	2.75	24,325
LDT2	73,819,296	25.44	2,902,042	282,998	33.48	8,453	0	0	0	1,061,880	2.89	367,905
MDV	42,398,169	21.13	2,006,851	569,721	25.50	22,343	0	0	0	882,345	2.78	317,381
LHD1	3,352,822	10.11	331,706	1,600,559	16.16	99,054	0	0	0	29,501	1.53	19,312
LHD2	372,264	8.97	41,513	699,649	13.65	51,266	0	0	0	7,235	1.55	4,664
MHD	392,697	4.88	80,459	1,479,205	8.43	175,532	16,176	7.02	2,305	7,279	0.89	8,191
HHO	4,764	3.82	1,246	954,863	5.35	178,466	93,483	4.83	19,362	2,908	0.54	5,402
OBUS	215,581	4.94	43,607	0	8.25	0	0	0	0	1,188	0.00	0
UBUS	62,381	8.56	7,285	320,680	8.30	38,642	67,406	6.22	10,844	57,503	0.57	100,242
MCY	1,144,822	42.41	26,997	0	0	0	0	0	0	0	0.00	0
SBUS	53,177	10.23	5,200	56,397	8.16	6,910	2,368	5.57	425	547	0.95	576
MH	116,256	4.42	26,309	55,147	9.35	5,896	0	0	0	0	0.00	0
All Other Buses	0	0	0	979,286	8.64	113,312	7,354	7.61	966	0	0.00	0
Motor Coach	0	0	0	140,557	5.50	25,559	0	0	0	0	0.00	0
PTO	0	0	0	43,560	4.87	8,949	0	0	0	136	0.48	283
	246,119,463		9,597,866	7,446,067		740,431	186,787		33,903	14,521,411		5,459,817

No Project (Current GP): Annual VMT

Vehicle type	Fleet percent	Annual VMT
LDA	36.56%	137,801,719
LD11	3.95%	14,883,639
LD12	34.38%	128,500,095
MDV	20.51%	77,322,750
LHD1	1.78%	6,701,190
LHD2	0.43%	1,636,375
MHD	0.68%	2,568,113
HHO	0.38%	1,444,176
OBUS	0.06%	211,412
UBUS	0.19%	697,622
MCY	0.50%	1,879,648
SBUS	0.06%	209,133
MH	0.08%	317,059
All Other Buses	0.37%	1,402,024
Motor Coach	0.06%	209,720
PTO	0.02%	56,603
	100%	376,931,876

No Project (Current GP) Conditions

Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent
LDA	84.85%	0.05%	0.00%	15.10%
LD11	95.30%	0.00%	0.00%	4.70%
LD12	95.15%	0.36%	0.00%	4.49%
MDV	92.86%	0.99%	0.00%	6.15%
LHD1	33.75%	21.14%	0.00%	45.11%
LHD2	15.64%	39.88%	0.00%	44.48%
MHD	9.08%	40.92%	0.75%	49.25%
HHO	0.05%	69.40%	7.04%	23.51%
OBUS	5.33%	86.95%	1.46%	6.27%
UBUS	11.39%	0.00%	0.00%	88.61%
MCY	100.00%	0.00%	0.00%	0.00%
SBUS	36.90%	20.64%	1.29%	41.17%
MH	64.90%	35.10%	0.00%	0.00%
All Other Buses	0.00%	98.11%	1.89%	0.00%
Motor Coach	0.00%	100.00%	0.00%	0.00%
PTO	0.00%	53.33%	0.00%	46.67%

= Equal to 16 (https://www.arb.ca.gov/ms/Downloads/enfca2014/enfca2014-ve3-technical-documentation-052015.pdf)

= Equal to 17 (https://www.arb.ca.gov/ms/Downloads/enfca2014/enfca2014-ve3-technical-documentation-052015.pdf)

= OBUS (https://www.arb.ca.gov/ms/Downloads/enfca2014/enfca2014-ve3-technical-documentation-052015.pdf)

Vehicle type	Gasoline			Diesel			CNG			Electricity		
	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	m/AWh	kWh
LDA	116,930,506	30.77	3,179,688	67,742	56.41	1,201	0	0	0	20,803,472	2.68	7,757,287
LD11	14,184,166	31.84	445,532	167	30.34	6	0	0	0	699,305	2.76	252,922
LD12	123,303,645	30.60	4,030,081	467,132	40.92	11,416	0	0	0	5,819,918	2.80	2,079,474
MDV	71,800,649	25.31	2,836,829	765,384	31.49	24,308	0	0	0	4,756,717	2.75	1,729,319
LHD1	2,261,344	11.25	201,093	1,416,925	16.80	84,317	0	0	0	3,022,921	1.53	1,080,689
LHD2	255,880	10.01	25,566	652,634	14.39	45,363	0	0	0	727,861	1.55	469,279
MHD	233,194	5.48	42,530	1,050,965	9.47	111,003	19,156	0	0	1,264,799	0.92	1,378,896
HHO	849	4.68	182	1,002,187	7.04	142,275	101,648	5.57	18,250	339,492	0.54	628,193
OBUS	11,262	5.57	2,021	183,817	9.43	19,485	3,080	0	0	13,253	0.00	0
UBUS	79,453	10.09	7,871	0	0.00	0	0	0.00	0	618,169	0.57	1,077,619
MCY	1,879,648	42.34	44,395	0	0.00	0	0	0	0	0	0.00	0
SBUS	77,179	11.14	6,927	43,157	8.91	4,842	2,695	0	0	86,101	0.95	90,704
MH	205,768	4.42	46,526	111,291	9.33	11,930	0	0	0	0	0.00	0
All Other Buses	0	0	0	1,375,466	9.90	138,898	26,558	9	3,101	0	0.00	0
Motor Coach	0	0	0	209,720	6.36	32,984	0	0	0	0	0.00	0
PTO	0	0	0	30,185	5.73	5,268	0	0	0	26,417	0.48	54,724
	331,223,543		10,869,241	7,376,771		633,314	153,137		21,351	36,178,425		17,499,104

GP Update (Year 2045): Annual VMT

Vehicle type	Fleet percent	Annual VMT
LDA	36.56%	169,377,090
LDT1	3.85%	18,394,020
LDT2	34.38%	159,284,623
MDV	20.51%	95,040,196
LHD1	1.78%	8,336,075
LHD2	0.43%	2,011,328
MHD	0.68%	3,156,560
HHO	0.58%	1,775,089
CBUS	0.06%	259,854
UBUS	0.19%	857,472
MCY	0.50%	2,310,343
SBUS	0.06%	257,063
MH	0.08%	389,709
All Other Buses	0.37%	1,723,279
Motor Coach	0.06%	257,774
PTQ	0.03%	69,572
	100%	463,300,638

GP Update Conditions

Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent
LDA	84.85%	0.05%	0.00%	15.10%
LDT1	95.10%	0.00%	0.00%	4.70%
LDT2	95.15%	0.36%	0.00%	4.49%
MDV	92.86%	0.99%	0.00%	6.15%
LHD1	33.72%	21.14%	0.00%	45.11%
LHD2	15.64%	39.88%	0.00%	44.48%
MHD	9.08%	40.92%	0.75%	49.25%
HHO	0.06%	69.40%	7.04%	23.51%
CBUS	5.33%	86.95%	1.46%	6.27%
UBUS	11.39%	0.00%	0.00%	88.61%
MCY	100.00%	0.00%	0.00%	0.00%
SBUS	36.50%	20.66%	1.29%	41.57%
MH	64.90%	35.10%	0.00%	0.00%
All Other Buses	0.00%	98.11%	1.89%	0.00%
Motor Coach	0.00%	100.00%	0.00%	0.00%
PTQ	0.00%	53.33%	0.00%	46.67%

cc Equal to T6 (<https://www.arb.ca.gov/msw/downloads/verifac2014/verifac2014-v03-technical-documentation-032015.pdf>)

cc Equal to T7 (<https://www.arb.ca.gov/msw/downloads/verifac2014/verifac2014-v03-technical-documentation-032015.pdf>)

cc CBUS (<https://www.arb.ca.gov/msw/downloads/verifac2014/verifac2014-v03-technical-documentation-032015.pdf>)

Vehicle type	VMT	mpg	Gasoline Gallons	VMT	Diesel mpg	Gallons	VMT	CNG mpg	Gallons	VMT	Electricity kWh	mpkWh
LDA	143,723,525	36.77	3,908,269	83,264	56.41	1,476	0	0	0	25,570,302	2.68	9,534,762
LDT1	17,434,273	31.84	547,619	206	30.34	7	0	0	0	859,541	2.76	310,876
LDT2	151,556,981	30.60	4,951,519	574,168	40.92	14,032	0	0	0	7,153,473	2.80	2,555,956
MDV	89,252,781	25.31	3,486,869	940,761	31.49	29,877	0	0	0	5,846,654	2.75	2,125,569
LHD1	2,779,499	11.25	247,171	1,741,594	16.80	103,662	0	0	0	3,715,581	1.53	2,434,536
LHD2	314,512	10.01	31,424	802,176	14.39	55,758	0	0	0	894,640	1.55	576,807
MHD	286,627	5.48	52,275	1,291,779	9.47	136,438	23,545	7.29	3,239	1,554,610	0.93	1,694,851
HHO	1,044	4.68	223	1,231,824	7.04	174,875	124,939	5.57	22,432	417,282	0.54	772,135
CBUS	13,843	5.57	2,484	225,936	9.43	23,950	3,785	0	0	16,289	0.00	0
UBUS	97,659	10.09	9,675	0	0.00	0	0	0.00	0	759,814	0.57	1,324,541
MCY	2,310,343	42.34	54,568	0	0.00	0	0	0	0	0	0.00	0
SBUS	94,864	11.14	8,515	53,045	8.91	5,951	3,313	5.98	554	105,830	0.95	111,487
MH	252,917	4.42	57,187	136,792	9.33	14,663	0	0	0	0	0.00	0
All Other Buses	0	0	0	1,690,635	9.90	170,724	37,644	8.56	3,812	0	0.00	0
Motor Coach	0	0	0	257,774	6.36	40,542	0	0	0	0	0.00	0
PTQ	0	0	0	37,102	5.73	6,476	0	0	0	32,470	0.48	67,263
	407,118,868		13,359,778	9,067,857		778,429	188,226		30,027	46,926,487		21,508,783

EMFAC Fuel Usage Year 2024

Vehicle type	GAS			DSL			NG			ELEC		
	WMT/day	Gallons/day	Miles/gallon	WMT/day	Gallons/day	Miles/gallon	WMT/day	Gallons/day	Miles/gallon	WMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	25,585	7,550	8.64	423	7,41	0	0	0	0.00
LDA	7,587,857	248,219	30.57	17,557	401	43.73	0	0	0.00	830,766	308,861	2.69
LD1	7,226,680	26,033	26.03	80	4	24.23	0	0	0.00	4,462	1,629	2.75
LD2	4,944,105	194,266	25.44	18,954	566	33.48	0	0	0.00	7,1120	2,641	2.89
LHD1	401,258	39,698	10.11	191,551	11,855	16.16	0	0	0.00	3,531	2,311	1.53
LHD2	4,453	4,968	8.97	83,232	6,130	13.66	0	0	0.00	866	538	1.55
MCY	76,675	1,805	42.41	0	0	0.00	0	0	0.00	0	0	0.00
MDV	2,839,650	134,410	21.13	38,157	1,496	25.50	0	0	0.00	39,096	21,257	2.78
MH	7,786	1,762	4.43	3,694	295	9.29	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	9,414	1,712	5.50	0	0	0.00	0	0	0.00
OBUS	14,439	2,921	4.94	0	0	0.00	0	0	0.00	80	88	0.90
P10	0	0.00	0.00	1,213	1,071	4.87	0	0	0.00	16	34	0.48
SBUS	3,562	348	10.23	3,777	463	8.16	159	28	5.57	37	39	0.95
T6	46,997	9,629	4.88	177,028	21,007	8.43	1,936	276	7.02	871	980	0.89
T7	570	149	3.82	11,4276	21,358	5.35	11,188	2,317	4.83	738	647	0.54
UBUS	4,178	488	8.56	21,478	2,588	8.30	4,513	726	6.22	3,851	6,714	0.57
Total	16,701,310	666,800	25.05	750,308	76,641	9.79	18,289	3,413	5.36	975,063	367,739	2.65

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: San Mateo (SF)

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
San Mateo (SF)	2024	All Other Buses	Aggregate	Aggregate	Diesel	1010.019767	65588.4382	65588.4382	0	8989.17593	7.589183563	0
San Mateo (SF)	2024	All Other Buses	Aggregate	Aggregate	Natural Gas	7.797527602	492.558504	492.558504	0	69.3979961	0.06472126	0
San Mateo (SF)	2024	LDA	Aggregate	Aggregate	Gasoline	239416.6914	745959.531	745959.531	0	1124271.39	243.7886389	0
San Mateo (SF)	2024	LDA	Aggregate	Aggregate	Diesel	770.4429717	37557.02655	17597.02655	0	3247.13815	0.404795649	0
San Mateo (SF)	2024	LDA	Aggregate	Aggregate	Electricity	17934.85844	689392.1346	0	689392.1346	89072.0548	0	266162.2626
San Mateo (SF)	2024	LDA	Aggregate	Aggregate	Plug-in Hybrid	750035994	275231.0752	113857.39	141373.6851	10316.3761	4.43624723	42699.06652
San Mateo (SF)	2024	LD1	Aggregate	Aggregate	Gasoline	25020.0531	72878.633	72878.633	0	114230.104	28.00023957	0
San Mateo (SF)	2024	LD1	Aggregate	Aggregate	Diesel	6.907673926	87.5059608	87.5059608	0	19.6886772	0.003596625	0
San Mateo (SF)	2024	LD1	Aggregate	Aggregate	Electricity	91.59653364	3278.131471	0	3278.131471	443.544237	0	1265.628007
San Mateo (SF)	2024	LD1	Aggregate	Aggregate	Plug-in Hybrid	54.2506822	2174.892913	971.290704	1203.60221	224.235056	0.032402304	363.5237404
San Mateo (SF)	2024	LD2	Aggregate	Aggregate	Gasoline	149535.9991	4914901.344	4914901.344	0	128035.565	193.3912128	0
San Mateo (SF)	2024	LD2	Aggregate	Aggregate	Diesel	582.174762	18954.01783	18954.01783	0	2798.23277	0.566142562	0
San Mateo (SF)	2024	LD2	Aggregate	Aggregate	Electricity	1250.965024	17598.8884	0	37598.8884	4394.26522	0	14516.27618
San Mateo (SF)	2024	LD2	Aggregate	Aggregate	Plug-in Hybrid	1631.39119	62724.8472	29203.50056	33521.34716	6745.80257	0.975280885	10124.44594
San Mateo (SF)	2024	LHD1	Aggregate	Aggregate	Gasoline	11110.29193	401258.44	401258.44	0	168526.795	39.69788678	0
San Mateo (SF)	2024	LHD1	Aggregate	Aggregate	Diesel	4986.601639	191551.3871	191551.3871	0	62851.0947	11.80450718	0
San Mateo (SF)	2024	LHD1	Aggregate	Aggregate	Electricity	56.88551675	35.30.641734	0	35.30.641734	794.654645	0	2311.167208
San Mateo (SF)	2024	LHD2	Aggregate	Aggregate	Gasoline	1289.384979	44551.73855	44551.73855	0	19209.915	4.968155251	0
San Mateo (SF)	2024	LHD2	Aggregate	Aggregate	Gasoline	84713.39231	283318.304	283318.304	0	67341.9319	6.193398203	0
San Mateo (SF)	2024	LHD2	Aggregate	Aggregate	Electricity	14.7237506	865.83827	0	865.83827	194.897859	0	558.211816
San Mateo (SF)	2024	MCY	Aggregate	Aggregate	Gasoline	13263.89041	76675.37497	76675.37497	0	26627.7808	1.808115529	0
San Mateo (SF)	2024	MDV	Aggregate	Aggregate	Gasoline	84713.39231	283318.304	283318.304	0	40241.539	13.8338832	0
San Mateo (SF)	2024	MDV	Aggregate	Aggregate	Diesel	1163.666539	38157.49894	38157.49894	0	5552.1003	1.496437119	0
San Mateo (SF)	2024	MDV	Aggregate	Aggregate	Electricity	1347.217613	40547.65645	0	40547.65645	6889.41548	0	1654.74197
San Mateo (SF)	2024	MDV	Aggregate	Aggregate	Plug-in Hybrid	894.361639	191551.16888	14667.10766	18548.06122	3698.20835	0.5565061	5602.060731
San Mateo (SF)	2024	MH	Aggregate	Aggregate	Gasoline	801.847893	7786.339137	7786.339137	0	80.2168629	1.762048979	0
San Mateo (SF)	2024	Motor Coach	Aggregate	Aggregate	Diesel	67.4728227	9413.913513	9413.913513	0	1550.52547	1.711867015	0
San Mateo (SF)	2024	OBUS	Aggregate	Aggregate	Gasoline	254.1966834	14438.68385	14438.68385	0	6085.86664	2.92058158	0
San Mateo (SF)	2024	OBUS	Aggregate	Aggregate	Electricity	0.873406414	79.58076023	0	79.58076023	17.47511555	0	88.16303587
San Mateo (SF)	2024	P10	Aggregate	Aggregate	Diesel	0	5213.191697	5213.191697	0	0	1.071012644	0
San Mateo (SF)	2024	P10	Aggregate	Aggregate	Electricity	0	16.32243227	0	16.32243227	0	0	33.81227978
San Mateo (SF)	2024	SBUS	Aggregate	Aggregate	Gasoline	66.88140617	3561.549238	3561.549238	0	267.525625	0.348304009	0
San Mateo (SF)	2024	SBUS	Aggregate	Aggregate	Diesel	168.959856	3777.201946	3777.201946	0	2446.54059	0.462822866	0
San Mateo (SF)	2024	SBUS	Aggregate	Aggregate	Electricity	0.908830063	36.62057063	0	36.62057063	8.14021738	0	38.57814485
San Mateo (SF)	2024	SBUS	Aggregate	Aggregate	Natural Gas	6.288614207	158.6097198	158.6097198	0	91.0591337	0.028483159	0
San Mateo (SF)	2024	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	1.983513681	130.4020515	130.4020515	0	45.9811444	0.014621724	0
San Mateo (SF)	2024	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.030399368	0.742575428	0	0.742575428	0.23782848	0	0.806647452
San Mateo (SF)	2024	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	2.646243289	179.0178477	179.0178477	0	60.8036708	0.020068539	0
San Mateo (SF)	2024	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.011838264	0.888997547	0	0.888997547	0.2720433	0	0.965703388
San Mateo (SF)	2024	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	8.646825221	466.3357103	466.3357103	0	198.704044	0.051464703	0
San Mateo (SF)	2024	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	0.06996419	3.786223693	0	3.786223693	1.60851772	0	4.112695159
San Mateo (SF)	2024	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	14.56016887	2937.802051	2937.802051	0	384.592704	0.303274632	0
San Mateo (SF)	2024	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	0.056120538	10.86543909	0	10.86543909	1.28919037	0	11.80294746
San Mateo (SF)	2024	T6 Instant Delivery Class 4	Aggregate	Aggregate	Diesel	366.2813441	12333.87447	12333.87447	0	6226.86312	1.508506872	0
San Mateo (SF)	2024	T6 Instant Delivery Class 4	Aggregate	Aggregate	Electricity	1.10625793	43.65736255	0	43.65736255	1.57862959	0	46.63824705
San Mateo (SF)	2024	T6 Instant Delivery Class 4	Aggregate	Aggregate	Natural Gas	1.404307203	54.10822375	54.10822375	0	30.0394638	0.00802232	0
San Mateo (SF)	2024	T6 Instant Delivery Class 5	Aggregate	Aggregate	Diesel	293.8153678	10274.01127	10074.01127	0	4352.7453	1.227014671	0
San Mateo (SF)	2024	T6 Instant Delivery Class 5	Aggregate	Aggregate	Electricity	0.616970787	24.30357372	0	24.30357372	8.80417313	0	25.96299935
San Mateo (SF)	2024	T6 Instant Delivery Class 5	Aggregate	Aggregate	Natural Gas	0.943607872	35.43158414	35.43158414	0	13.4652843	0.005216791	0
San Mateo (SF)	2024	T6 Instant Delivery Class 6	Aggregate	Aggregate	Diesel	614.8350364	20894.67489	20894.67489	0	9773.69597	2.539887401	0
San Mateo (SF)	2024	T6 Instant Delivery Class 6	Aggregate	Aggregate	Electricity	1.548728889	60.49169567	0	60.49169567	22.1003612	0	64.62201294
San Mateo (SF)	2024	T6 Instant Delivery Class 6	Aggregate	Aggregate	Natural Gas	1.950903473	74.71166879	74.71166879	0	27.8393926	0.011019471	0
San Mateo (SF)	2024	T6 Instant Delivery Class 7	Aggregate	Aggregate	Diesel	146.2960561	8108.497371	8108.497371	0	2116.18472	0.968804451	0
San Mateo (SF)	2024	T6 Instant Delivery Class 7	Aggregate	Aggregate	Electricity	0.185788329	8.385499202	0	8.385499202	2.65119945	0	8.958053364
San Mateo (SF)	2024	T6 Instant Delivery Class 7	Aggregate	Aggregate	Natural Gas	3.655196841	206.4111391	206.4111391	0	52.1596589	0.030190225	0
San Mateo (SF)	2024	T6 Instant Other Class 4	Aggregate	Aggregate	Diesel	415.5850531	16931.77251	16931.77251	0	4804.1463	1.983456033	0
San Mateo (SF)	2024	T6 Instant Other Class 4	Aggregate	Aggregate	Electricity	0.992766553	44.34149507	0	44.34149507	11.4763813	0	47.00558028
San Mateo (SF)	2024	T6 Instant Other Class 4	Aggregate	Aggregate	Natural Gas	1.99589409	60.77961234	60.77961234	0	15.0232536	0.008046765	0
San Mateo (SF)	2024	T6 Instant Other Class 5	Aggregate	Aggregate	Diesel	999.326284	43641.98074	43641.98074	0	11552.5164	5.104992134	0
San Mateo (SF)	2024	T6 Instant Other Class 5	Aggregate	Aggregate	Electricity	1.383953572	62.738618	0	62.738618	15.9885033	0	66.50802234
San Mateo (SF)	2024	T6 Instant Other Class 5	Aggregate	Aggregate	Natural Gas	2.665543721	121.4962044	121.4962044	0	30.8338854	0.015792543	0
San Mateo (SF)	2024	T6 Instant Other Class 6	Aggregate	Aggregate	Diesel	644.9204798	27528.84395	27528.84395	0	7455.35323	3.226104653	0
San Mateo (SF)	2024	T6 Instant Other Class 6	Aggregate	Aggregate	Electricity	1.520445661	66.33436936	0	66.33436936	17.1765653	0	72.43997242
San Mateo (SF)	2024	T6 Instant Other Class 6	Aggregate	Aggregate	Natural Gas	1.728483917	78.15716702	78.15716702	0	19.9812741	0.010194293	0
San Mateo (SF)	2024	T6 Instant Other Class 7	Aggregate	Aggregate	Diesel	272.5670106	12873.6112	12873.6112	0	8150.87464	1.477380552	0
San Mateo (SF)	2024	T6 Instant Other Class 7	Aggregate	Aggregate	Electricity	0.	0.	0	0	0	0	0
San Mateo (SF)	2024	T6 Instant Other Class 7	Aggregate	Aggregate	Natural Gas	0.840569259	32.8479334	32.84839734	0	74.3366389	0.042543623	0
San Mateo (SF)	2024	T6 Instant Tractor Class 6	Aggregate	Aggregate	Gasoline	6.846825221	330.807955	330.807955	0	50.1713277	0.064642622	0
San Mateo (SF)	2024	T6 Instant Tractor Class 6	Aggregate	Aggregate	Electricity	0.062035262	1.932738919	1.93728949	0	0.26268073	0.0001485	0
San Mateo (SF)	2024	T6 Instant Tractor Class 6	Aggregate	Aggregate	Diesel	63.1481416	371.4941416	371.4941416	0	4.14014044	0.14014044	0
San Mateo (SF)	2024	T6 Instant Tractor Class 7	Aggregate	Aggregate	Gasoline	0.045061084	5.40560868	0	4.50610868	0.7408564	0	4.84321322



San Mateo (SF)	2024 T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	1.1120648	71.92311018	71.92311018	0	12.8554691	0.009102086	0
San Mateo (SF)	2024 T6 OOS Class 4	Aggregate	Aggregate	Diesel	1.123788222	73.34403377	73.34403377	0	25.8246533	0.008182281	0
San Mateo (SF)	2024 T6 OOS Class 5	Aggregate	Aggregate	Diesel	1.492523866	100.6148253	100.6148253	0	34.2984053	0.011231279	0
San Mateo (SF)	2024 T6 OOS Class 6	Aggregate	Aggregate	Diesel	4.888813631	262.9094172	262.9094172	0	112.574737	0.038629474	0
San Mateo (SF)	2024 T6 OOS Class 7	Aggregate	Aggregate	Diesel	7.68570669	1911.678388	1911.678388	0	176.61754	0.195918438	0
San Mateo (SF)	2024 T6 Public Class 4	Aggregate	Aggregate	Diesel	34.20999397	1162.950929	1162.950929	0	175.497269	0.153603171	0
San Mateo (SF)	2024 T6 Public Class 4	Aggregate	Aggregate	Electricity	0.160369065	6.87740272	0	6.87740272	0.82209608	0	8.121520704
San Mateo (SF)	2024 T6 Public Class 4	Aggregate	Aggregate	Natural Gas	1.217342352	51.22595697	51.22595697	0	6.24496627	0.00775953	0
San Mateo (SF)	2024 T6 Public Class 5	Aggregate	Aggregate	Diesel	104.9502653	3865.304928	3865.304928	0	538.394861	0.494415674	0
San Mateo (SF)	2024 T6 Public Class 5	Aggregate	Aggregate	Electricity	0.391950484	16.70415981	0	16.70415981	2.0107072	0	19.72595162
San Mateo (SF)	2024 T6 Public Class 5	Aggregate	Aggregate	Natural Gas	8.287784814	341.5227447	341.5227447	0	42.5163361	0.052109302	0
San Mateo (SF)	2024 T6 Public Class 6	Aggregate	Aggregate	Diesel	66.92224605	2330.283246	2330.283246	0	343.311122	0.303570875	0
San Mateo (SF)	2024 T6 Public Class 6	Aggregate	Aggregate	Electricity	0.308973061	12.10297475	0	12.10297475	1.58651883	0	14.29240963
San Mateo (SF)	2024 T6 Public Class 6	Aggregate	Aggregate	Natural Gas	2.686862032	112.0688131	112.0688131	0	13.7836022	0.016885504	0
San Mateo (SF)	2024 T6 Public Class 7	Aggregate	Aggregate	Diesel	143.5330908	6329.543625	6329.543625	0	736.324756	0.820016689	0
San Mateo (SF)	2024 T6 Public Class 7	Aggregate	Aggregate	Electricity	0.659246533	42.31276549	0	42.31276549	1.38319471	0	49.96714835
San Mateo (SF)	2024 T6 Public Class 7	Aggregate	Aggregate	Natural Gas	7.37607745	390.2663914	390.2663914	0	37.8618921	0.057968499	0
San Mateo (SF)	2024 T6 Utility Class 5	Aggregate	Aggregate	Diesel	8.28809359	337.0120214	337.0120214	0	106.215598	0.038117309	0
San Mateo (SF)	2024 T6 Utility Class 5	Aggregate	Aggregate	Electricity	0.963066278	2.74370955	0	2.74370955	0.80724836	0	3.073128614
San Mateo (SF)	2024 T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.130344005	4.323833815	4.323833815	0	1.42140364	0.000590809	0
San Mateo (SF)	2024 T6 Utility Class 6	Aggregate	Aggregate	Diesel	1.575007959	63.65109565	63.65109565	0	20.1601019	0.007173849	0
San Mateo (SF)	2024 T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.011765013	0.51183897	0	0.51183897	0.15059217	0	0.573292091
San Mateo (SF)	2024 T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.023280001	0.861137985	0.861137985	0	0.28619203	0.000116913	0
San Mateo (SF)	2024 T6 Utility Class 7	Aggregate	Aggregate	Diesel	1.784439681	88.10009957	88.10009957	0	22.8408279	0.009873541	0
San Mateo (SF)	2024 T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.034117152	0.83513856	0	0.83513856	0.18669954	0	0.935408125
San Mateo (SF)	2024 T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.03565986	1.534846409	1.534846409	0	0.45388621	0.00020776	0
San Mateo (SF)	2024 T6T5	Aggregate	Aggregate	Gasoline	803.5706606	46997.13647	46997.13647	0	16077.8418	9.629176874	0
San Mateo (SF)	2024 T6T5	Aggregate	Aggregate	Electricity	4.712404135	429.3775092	0	429.3775092	94.2857819	0	500.8372762
San Mateo (SF)	2024 T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	84.84073748	17133.70801	17133.70801	0	1949.64015	2.803922103	0
San Mateo (SF)	2024 T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	0.518432836	92.356237	0	92.356237	11.9135866	0	168.6356614
San Mateo (SF)	2024 T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	0.192916589	39.36784357	39.36784357	0	4.43323231	0.006981924	0
San Mateo (SF)	2024 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	76.4084562	20499.40957	20499.40957	0	1755.85919	3.29633371	0
San Mateo (SF)	2024 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	32.17354332	7448.809261	7448.809261	0	739.348026	1.217759609	0
San Mateo (SF)	2024 T7 Other Port Class 8	Aggregate	Aggregate	Diesel	8.837314454	1626.469854	1626.469854	0	144.578464	0.273643721	0
San Mateo (SF)	2024 T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.031367263	3.26050997	0	3.26050997	0.25140908	0	5.942202173
San Mateo (SF)	2024 T7 POAK Class 8	Aggregate	Aggregate	Diesel	56.8181039	5636.396346	5636.396346	0	929.54418	0.966024078	0
San Mateo (SF)	2024 T7 POAK Class 8	Aggregate	Aggregate	Electricity	0.131851273	10.43004771	0	10.43004771	1.21570862	0	18.98234511
San Mateo (SF)	2024 T7 POAK Class 8	Aggregate	Aggregate	Natural Gas	0.028205543	2.725407467	2.725407467	0	0.46144268	0.000480064	0
San Mateo (SF)	2024 T7 Public Class 8	Aggregate	Aggregate	Diesel	332.34531531	14456.55637	14456.55637	0	1704.93166	2.762333038	0
San Mateo (SF)	2024 T7 Public Class 8	Aggregate	Aggregate	Electricity	1.134930373	70.76402518	0	70.76402518	1.82219281	0	138.8802418
San Mateo (SF)	2024 T7 Public Class 8	Aggregate	Aggregate	Natural Gas	1.60266138	78.39394478	78.39394478	0	8.22165288	0.017020398	0
San Mateo (SF)	2024 T7 Single Concrete/Transit	Aggregate	Aggregate	Diesel	48.33256085	3435.825603	3435.825603	0	455.292713	0.579451144	0
San Mateo (SF)	2024 T7 Single Concrete/Transit	Aggregate	Aggregate	Electricity	0.397952369	28.87532303	0	28.87532303	3.74871131	0	52.64416571
San Mateo (SF)	2024 T7 Single Concrete/Transit	Aggregate	Aggregate	Natural Gas	2.859845123	207.3550381	207.3550381	0	26.9397411	0.035364148	0
San Mateo (SF)	2024 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	114.077676	10437.83978	10437.83978	0	1639.81171	1.886073866	0
San Mateo (SF)	2024 T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	0.348387641	25.93609401	0	25.93609401	3.28181158	0	47.28549805
San Mateo (SF)	2024 T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	9.113712089	572.3361799	572.3361799	0	85.8511679	0.105335289	0
San Mateo (SF)	2024 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	180.5434949	10863.95625	10863.95625	0	1700.71836	1.863044516	0
San Mateo (SF)	2024 T7 Single Other Class 8	Aggregate	Aggregate	Electricity	0.376763203	27.39161443	0	27.39161443	3.54910937	0	49.93913617
San Mateo (SF)	2024 T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	11.58787981	737.3624714	737.3624714	0	109.15781	0.132640751	0
San Mateo (SF)	2024 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	131.2263109	8511.736571	8511.736571	0	401.64103	3.499579398	0
San Mateo (SF)	2024 T7 SWCV Class 8	Aggregate	Aggregate	Electricity	0.782742032	49.03923842	0	49.03923842	3.60661335	0	91.23998962
San Mateo (SF)	2024 T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	119.1407726	7712.027988	7712.027988	0	548.047554	1.691284196	0
San Mateo (SF)	2024 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	181.0109509	13952.32317	13952.32317	0	2659.14912	2.283276047	0
San Mateo (SF)	2024 T7 Tractor Class 8	Aggregate	Aggregate	Electricity	0.499990036	37.82532684	0	37.82532684	7.26498599	0	68.86894326
San Mateo (SF)	2024 T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	24.02355135	1838.262606	1838.262606	0	409.062201	0.32812323	0
San Mateo (SF)	2024 T7 Utility Class 8	Aggregate	Aggregate	Diesel	6.010973441	270.9164503	270.9164503	0	76.9404601	0.046685062	0
San Mateo (SF)	2024 T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.032138141	0.773029309	0	0.773029309	0.15613362	0	1.455455256
San Mateo (SF)	2024 T7T5	Aggregate	Aggregate	Gasoline	4.384109781	570.1519189	570.1519189	0	87.7572685	0.149160189	0
San Mateo (SF)	2024 T7T5	Aggregate	Aggregate	Electricity	0.004426254	1.309490543	0	1.309490543	0.08856049	0	2.63120371
San Mateo (SF)	2024 UBUS	Aggregate	Aggregate	Gasoline	61.44417623	4178.029813	4178.029813	0	245.776795	0.487956261	0
San Mateo (SF)	2024 UBUS	Aggregate	Aggregate	Diesel	277.5892805	21477.77652	21477.77652	0	1110.35712	2.588054266	0
San Mateo (SF)	2024 UBUS	Aggregate	Aggregate	Electricity	37.07940274	3851.303292	0	3851.303292	148.317611	0	6713.761815
San Mateo (SF)	2024 UBUS	Aggregate	Aggregate	Natural Gas	65.26113973	4514.572873	4514.572873	0	561.044559	0.726284068	0

EMFAC Fuel Usage, Year 2045

Vehicle type	VMT/day	GAS			DSL			NG			ELEC		
		Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh	
All other Buses	0	0	0.00	69,257	6,994	9.90	1,337	156	8.36	0	0	0.00	
LDA	5,887,632	160,103	36.77	3,411	40	56.41	0	0	0.00	1,047,491	390,592	2.68	
LD1	714,197	22,453	31.84	8	0	30.24	0	0	0.00	35,211	12,735	2.76	
LD12	6,208,551	202,922	30.60	23,521	593	40.92	0	0	0.00	293,043	104,905	2.80	
LD1	272,268	24,212	11.25	170,599	10,154	16.80	0	0	0.00	363,963	238,477	1.53	
LD12	30,800	3,078	10.01	76,578	5,443	14.24	0	0	0.00	87,453	56,502	1.55	
MCV	9,644	2,235	42.34	0	0	0.00	0	0	0.00	0	0	0.00	
MDV	3,615,286	142,839	25.31	38,538	1,224	31.49	0	0	0.00	239,309	87,074	2.73	
MH	10,341	2,343	4.42	5,604	401	9.21	0	0	0.00	0	0	0.00	
Motor coach	0	0	0.00	10,560	1,681	6.30	0	0	0.00	0	0	0.00	
ORBUS	4,890	878	5.57	0	0	0.00	0	0	0.00	3,753	6,375	0.90	
PTO	0	0	0.00	3,634	834	5.72	0	0	0.00	3,181	6,395	0.48	
SBUS	3,886	349	11.14	2,173	244	8.91	136	23	5.98	4,333	4,667	0.93	
T6	28,077	5,121	5.48	126,537	13,363	9.47	2,306	316	7.29	152,283	166,220	0.92	
T7	12	23	4.68	120,644	17,130	7.00	12,238	2,192	5.57	40,878	75,635	0.54	
UBUS	4,001	396	10.09	0	0	0.00	0	0	0.00	31,126	54,260	0.57	
Total	16,874,724	566,930	29.77	653,083	58,104	11.24	16,018	2,692	5.93	2,304,407	1,203,532	1.91	

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: San Mateo (SF)

Calendar Year: 2045

Season: Annual

Vehicle Classification: EMFAC2022 Categories

Units: miles/day for CVMT and EVMT, mps/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
San Mateo (SF)	2045	All Other Buses	Aggregate	Aggregate	Diesel	1340.09731	69257.08708	69257.08708	0	1195.6362	6.9937494	0
San Mateo (SF)	2045	All Other Buses	Aggregate	Aggregate	Natural Gas	24.36419826	1337.25222	1337.25222	0	216.841365	0.15615385	0
San Mateo (SF)	2045	LDA	Aggregate	Aggregate	Gasoline	241546.7287	5774157.802	5774157.802	0	1135479.97	156.211025	0
San Mateo (SF)	2045	LDA	Aggregate	Aggregate	Diesel	159.995768	3410.921204	3410.921204	0	719.953947	0.060460203	0
San Mateo (SF)	2045	LDA	Aggregate	Aggregate	Electricity	33287.8523	883009.3787	0	883009.3787	157816.147	0	340914.4989
San Mateo (SF)	2045	LDA	Aggregate	Plug-in Hybrid	11366.29417	277975.8346	113494.5661	164481.2685	46999.6264	3.891648389	49678.24542	0
San Mateo (SF)	2045	LD1	Aggregate	Aggregate	Gasoline	32031.3468	707176.6423	707176.6423	0	14098.93	22.18888986	0
San Mateo (SF)	2045	LD1	Aggregate	Aggregate	Diesel	0.372594954	8.429698245	8.429698245	0	1.73296889	0.000277884	0
San Mateo (SF)	2045	LD1	Aggregate	Aggregate	Electricity	960.9380954	24986.87947	0	24986.87947	4532.30129	0	9646.997756
San Mateo (SF)	2045	LD1	Aggregate	Plug-in Hybrid	735.615859	17244.91005	7020.566118	10224.34393	3041.77161	0.244423207	3088.056601	0
San Mateo (SF)	2045	LD2	Aggregate	Aggregate	Gasoline	270934.7147	6139422.567	6139422.567	0	1257668.65	200.4989241	0
San Mateo (SF)	2045	LD2	Aggregate	Aggregate	Diesel	1035.670912	23520.88392	23520.88392	0	4812.72498	0.574810196	0
San Mateo (SF)	2045	LD2	Aggregate	Aggregate	Electricity	10719.99382	192704.9604	0	192704.9604	50549.6946	0	74400.0195
San Mateo (SF)	2045	LD2	Aggregate	Plug-in Hybrid	7382.073596	169466.3075	69128.34732	100337.9601	30524.8743	2.422616595	30305.05451	0
San Mateo (SF)	2045	LHD1	Aggregate	Aggregate	Gasoline	11718.7122	272268.1519	272268.1519	0	174592.26	24.21180232	0
San Mateo (SF)	2045	LHD1	Aggregate	Aggregate	Diesel	7326.965544	170599.3232	170599.3232	0	92164.0092	10.15428541	0
San Mateo (SF)	2045	LHD1	Aggregate	Aggregate	Electricity	12774.23542	363962.8551	0	363962.8551	179038.681	0	238477.0333
San Mateo (SF)	2045	LHD2	Aggregate	Aggregate	Gasoline	1351.214651	30808.25966	30808.25966	0	20131.085	3.078152775	0
San Mateo (SF)	2045	LHD2	Aggregate	Aggregate	Diesel	3483.022905	78577.83275	78577.83275	0	43812.0465	5.461775665	0
San Mateo (SF)	2045	LHD2	Aggregate	Aggregate	Electricity	3176.288334	87635.17535	0	87635.17535	42035.0551	0	56501.63863
San Mateo (SF)	2045	MDV	Aggregate	Aggregate	Gasoline	24094.30731	94643.50883	94643.50883	0	48188.6142	2.235372905	0
San Mateo (SF)	2045	MDV	Aggregate	Aggregate	Diesel	1704.599048	38538.17851	38538.17851	0	7850.09012	1.223931952	0
San Mateo (SF)	2045	MDV	Aggregate	Aggregate	Electricity	9891.1744	174331.0037	0	175311.0337	46408.5766	0	67684.51664
San Mateo (SF)	2045	MDV	Aggregate	Plug-in Hybrid	4678.466632	108412.5036	44214.59057	64197.91304	19345.4595	1.580717441	19389.68314	0
San Mateo (SF)	2045	MH	Aggregate	Aggregate	Gasoline	1413.70414	10360.77764	10360.77764	0	141.426962	2.34267516	0
San Mateo (SF)	2045	MH	Aggregate	Aggregate	Diesel	845.3603671	5603.696616	5603.696616	0	84.536672	0.606072662	0
San Mateo (SF)	2045	Motor Coach	Aggregate	Aggregate	Diesel	83.1480347	10559.74816	10559.74816	0	1910.74184	1.660796314	0
San Mateo (SF)	2045	ORBUS	Aggregate	Aggregate	Gasoline	156.0235743	4890.338281	4890.338281	0	3121.71967	0.87765787	0
San Mateo (SF)	2045	ORBUS	Aggregate	Aggregate	Electricity	109.1189369	5754.598657	0	5754.598657	2183.25169	0	6375.21482
San Mateo (SF)	2045	PTO	Aggregate	Aggregate	Diesel	0	3634.352249	3634.352249	0	0	0.634330593	0
San Mateo (SF)	2045	PTO	Aggregate	Aggregate	Electricity	0	3180.672569	0	3180.672569	0	6588.822922	0
San Mateo (SF)	2045	SBUS	Aggregate	Aggregate	Gasoline	95.72406159	3886.107611	3886.107611	0	38.896246	0.34880947	0
San Mateo (SF)	2045	SBUS	Aggregate	Aggregate	Diesel	106.7412802	2173.012116	2173.012116	0	1545.63174	0.243790116	0
San Mateo (SF)	2045	SBUS	Aggregate	Aggregate	Electricity	131.7955471	4335.348793	0	4335.348793	1212.13677	0	4567.097421
San Mateo (SF)	2045	SBUS	Aggregate	Aggregate	Natural Gas	6.700428774	135.7205961	135.7205961	0	97.0222086	0.022710022	0
San Mateo (SF)	2045	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	1.10764782	77.70120848	77.70120848	0	25.440487	0.007827094	0
San Mateo (SF)	2045	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	1.439108172	108.1701657	0	108.1701657	33.0707058	0	117.5034687
San Mateo (SF)	2045	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	1.362110819	106.8021147	106.8021147	0	31.3013066	0.010754986	0
San Mateo (SF)	2045	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	1.762618302	148.1799865	0	148.1799865	40.5049686	0	160.9654779
San Mateo (SF)	2045	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	6.16205666	277.5288439	277.5288439	0	141.604268	0.02801683	0
San Mateo (SF)	2045	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	8.081871279	388.7466818	0	388.7466818	185.721402	0	422.2891154
San Mateo (SF)	2045	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	15.98300316	3181.470521	3181.470521	0	367.289413	0.281548113	0
San Mateo (SF)	2045	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	4.809275908	997.7463473	0	997.7463473	110.524054	0	1083.835418
San Mateo (SF)	2045	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	258.4947015	8460.912602	8460.912602	0	3688.71939	0.919301939	0
San Mateo (SF)	2045	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	255.3735396	9044.108866	0	9044.108866	3644.18041	0	9661.632289
San Mateo (SF)	2045	T6 Instate Delivery Class 4	Aggregate	Aggregate	Natural Gas	3.426943337	114.3509205	0	49.416216	0.016558392	0	0
San Mateo (SF)	2045	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	210.4040925	6890.732113	6890.732113	0	3002.4664	0.7498053	0
San Mateo (SF)	2045	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	208.3469776	7381.224706	0	7381.224706	2973.11137	0	7885.207931
San Mateo (SF)	2045	T6 Instate Delivery Class 5	Aggregate	Aggregate	Natural Gas	2.730470458	90.60927916	90.60927916	0	38.9638134	0.01306363	0
San Mateo (SF)	2045	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	436.485181	14291.88254	14291.88254	0	6238.69115	1.554300064	0
San Mateo (SF)	2045	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	432.7553576	15322.01532	0	15322.01532	6175.41895	0	16368.18841
San Mateo (SF)	2045	T6 Instate Delivery Class 6	Aggregate	Aggregate	Natural Gas	5.727749349	189.763721	189.763721	0	81.749832	0.027446994	0
San Mateo (SF)	2045	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	147.5402908	7442.124613	7442.124613	0	2105.4342	0.817452742	0
San Mateo (SF)	2045	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	79.72210704	4315.367428	0	4315.367428	1137.63447	0	4610.016741
San Mateo (SF)	2045	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	3.34541917	166.6756095	166.6756095	0	47.7391316	0.023839747	0
San Mateo (SF)	2045	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	293.4086178	12138.97095	12138.97095	0	3391.81518	1.178379739	0
San Mateo (SF)	2045	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	289.5698489	12753.5735	0	12753.5735	3347.42745	0	13519.82205
San Mateo (SF)	2045	T6 Instate Other Class 4	Aggregate	Aggregate	Natural Gas	3.922088279	153.8571176	153.8571176	0	45.3399405	0.019518373	0
San Mateo (SF)	2045	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	754.4339512	28910.07705	28910.07705	0	8721.25548	3.053397144	0
San Mateo (SF)	2045	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	744.3778532	33816.47028	0	32816.47028	8665.85761	0	34787.69544
San Mateo (SF)	2045	T6 Instate Other Class 5	Aggregate	Aggregate	Natural Gas	9.811091236	388.7795123	388.7795123	0	113.416215	0.049194305	0
San Mateo (SF)	2045	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	476.6235602	18259.07222	18259.07222	0	5508.76836	1.915799688	0
San Mateo (SF)	2045	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	470.281655	20718.97198	0	20718.97198	5436.38439	0	21963.79033
San Mateo (SF)	2045	T6 Instate Other Class 6	Aggregate	Aggregate	Natural Gas	6.22522301	246.2286959	246.2286959	0	71.963578	0.031165569	0
San Mateo (SF)	2045	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	777.72210704	10977.97397	10977.97397	0	2228.0771	1.147759504	0
San Mateo (SF)	2045	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	772.4259727	3272.529272	0	3272.529272	836.42029	0	886.42029
San Mateo (SF)	2045	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	6.246352122	229.701038	229.701038	0	72.020701	0.02976991	0
San Mateo (SF)	2045	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	77.94738774	348.846848	348.846848	0	87.240002	0.03404662	0
San Mateo (SF)	2045	T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	413.1953847	1431.3581	0	1431.3581	368.12124	0	438.026001
San Mateo (SF)	2045	T6 Instate Tractor Class 6	Aggregate	Aggregate	Natural Gas	0.06037197	0.64468685	0.64468685	0	1.11406	0.000573486	0
San Mateo (SF)	2045	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	80.9588282	4392.535507	4392.535507	0	925.93999	0.420642467	0
San Mateo (SF)	2045	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	977.4090913	977.4090913	977.4090913	0	103.742781	0.35742781	0
San Mateo (SF)	2045	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	0.15062881	85.1504179	85.1504179	0	10.8211592	0.010354915	0

San Mateo (SF)	2045 T6 OOS Class 4	Aggregate	Aggregate	Diesel	1.448137015	103.9505518	103.9505518	0	33.2781886	0.009826262	0
San Mateo (SF)	2045 T6 OOS Class 5	Aggregate	Aggregate	Diesel	1.781937022	142.6014643	142.6014643	0	40.9489128	0.013480645	0
San Mateo (SF)	2045 T6 OOS Class 6	Aggregate	Aggregate	Diesel	8.058750551	372.6217061	372.6217061	0	185.190088	0.03528562	0
San Mateo (SF)	2045 T6 OOS Class 7	Aggregate	Aggregate	Diesel	9.900584051	2709.423155	2709.423155	0	227.555421	0.229198789	0
San Mateo (SF)	2045 T6 Public Class 4	Aggregate	Aggregate	Diesel	19.52345536	663.9233041	663.9233041	0	100.155326	0.076961591	0
San Mateo (SF)	2045 T6 Public Class 4	Aggregate	Aggregate	Electricity	14.99182115	593.0482548	0	593.0482548	76.9080425	0	700.3310146
San Mateo (SF)	2045 T6 Public Class 4	Aggregate	Aggregate	Natural Gas	1.195734417	47.48093238	47.48093238	0	7.16011756	0.007139035	0
San Mateo (SF)	2045 T6 Public Class 5	Aggregate	Aggregate	Diesel	67.26735203	2287.699914	2287.699914	0	345.081516	0.265597964	0
San Mateo (SF)	2045 T6 Public Class 5	Aggregate	Aggregate	Electricity	51.66253244	2040.540595	0	2040.540595	265.028791	0	2409.675525
San Mateo (SF)	2045 T6 Public Class 5	Aggregate	Aggregate	Natural Gas	5.521256511	183.75922	183.75922	0	28.2340459	0.027893106	0
San Mateo (SF)	2045 T6 Public Class 6	Aggregate	Aggregate	Diesel	39.52543127	1341.125002	1341.125002	0	202.765524	0.155152287	0
San Mateo (SF)	2045 T6 Public Class 6	Aggregate	Aggregate	Electricity	30.08588062	1184.191282	0	1184.191282	154.340568	0	1398.412145
San Mateo (SF)	2045 T6 Public Class 6	Aggregate	Aggregate	Natural Gas	2.856290326	96.77841841	96.77841841	0	14.6527694	0.014543142	0
San Mateo (SF)	2045 T6 Public Class 7	Aggregate	Aggregate	Diesel	96.97436282	4018.013682	4018.013682	0	497.479481	0.452392395	0
San Mateo (SF)	2045 T6 Public Class 7	Aggregate	Aggregate	Electricity	59.95005172	2899.241616	0	2899.241616	307.543765	0	3423.71604
San Mateo (SF)	2045 T6 Public Class 7	Aggregate	Aggregate	Natural Gas	7.480223702	306.7215458	306.7215458	0	38.3735476	0.045000393	0
San Mateo (SF)	2045 T6 Utility Class 5	Aggregate	Aggregate	Diesel	3.817160202	151.0488509	151.0488509	0	48.8596517	0.015659236	0
San Mateo (SF)	2045 T6 Utility Class 5	Aggregate	Aggregate	Electricity	5.226867042	215.2468453	0	215.2468453	66.9038981	0	241.0901108
San Mateo (SF)	2045 T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.032462094	1.284557511	1.284557511	0	0.4155148	0.000164248	0
San Mateo (SF)	2045 T6 Utility Class 6	Aggregate	Aggregate	Diesel	0.721896198	28.5569782	28.5569782	0	9.24027134	0.00296069	0
San Mateo (SF)	2045 T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.987468401	40.66539317	0	40.66539317	12.639595	0	45.54781804
San Mateo (SF)	2045 T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.006139187	0.242855743	0.242855743	0	0.0785816	3.10539E-05	0
San Mateo (SF)	2045 T6 Utility Class 7	Aggregate	Aggregate	Diesel	0.803201021	39.10854578	39.10854578	0	10.2809731	0.004031368	0
San Mateo (SF)	2045 T6 Utility Class 7	Aggregate	Aggregate	Electricity	1.100753337	57.208071	0	57.208071	14.8094627	0	64.0766581
San Mateo (SF)	2045 T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.006830624	0.332588934	0.332588934	0	0.08743199	4.18293E-05	0
San Mateo (SF)	2045 T6T5	Aggregate	Aggregate	Gasoline	717.6860566	28076.75885	28076.75885	0	14359.5346	5.120602879	0
San Mateo (SF)	2045 T6T5	Aggregate	Aggregate	Electricity	622.2080137	32146.10298	0	32146.10298	12449.1379	0	37496.50086
San Mateo (SF)	2045 T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	100.6441732	20863.16683	20863.16683	0	2312.8031	2.825789922	0
San Mateo (SF)	2045 T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	27.81755751	5987.151099	0	5987.151099	639.247472	0	10932.09531
San Mateo (SF)	2045 T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	0.384419202	38.22248517	38.22248517	0	4.23795534	0.006108563	0
San Mateo (SF)	2045 T7 NVOOS Class 8	Aggregate	Aggregate	Diesel	111.9165516	31925.01641	31925.01641	0	2571.84236	4.11241605	0
San Mateo (SF)	2045 T7 NVOOS Class 8	Aggregate	Aggregate	Diesel	48.10846972	11600.49791	11600.49791	0	1105.53263	1.510876195	0
San Mateo (SF)	2045 T7 Other Port Class 8	Aggregate	Aggregate	Diesel	8.22566319	1987.571462	1987.571462	0	134.57185	0.27369486	0
San Mateo (SF)	2045 T7 Other Port Class 8	Aggregate	Aggregate	Electricity	1.893952606	502.4997648	0	502.4997648	30.8050646	0	914.5331086
San Mateo (SF)	2045 T7 POAK Class 8	Aggregate	Aggregate	Diesel	59.60331954	6917.380246	6917.380246	0	975.110308	0.969364719	0
San Mateo (SF)	2045 T7 POAK Class 8	Aggregate	Aggregate	Electricity	13.81986798	1585.523519	0	1585.523519	226.09304	0	2885.600858
San Mateo (SF)	2045 T7 POAK Class 8	Aggregate	Aggregate	Natural Gas	0.134544739	15.616385383	15.616385383	0	2.20115194	0.002560664	0
San Mateo (SF)	2045 T7 Public Class 8	Aggregate	Aggregate	Diesel	238.6562844	9494.881852	9494.881852	0	1224.30674	1.583104393	0
San Mateo (SF)	2045 T7 Public Class 8	Aggregate	Aggregate	Electricity	126.8078751	6036.078631	0	6036.078631	650.524399	0	11846.30266
San Mateo (SF)	2045 T7 Public Class 8	Aggregate	Aggregate	Natural Gas	1.860433161	74.46306751	74.46306751	0	9.54402122	0.015285056	0
San Mateo (SF)	2045 T7 Single Concrete/Transit	Aggregate	Aggregate	Diesel	25.24786853	1653.395896	1653.395896	0	237.834922	0.24487097	0
San Mateo (SF)	2045 T7 Single Concrete/Transit	Aggregate	Aggregate	Electricity	32.09855696	2292.304289	0	2292.304289	302.368407	0	4179.224132
San Mateo (SF)	2045 T7 Single Concrete/Transit	Aggregate	Aggregate	Natural Gas	1.553634591	101.7309393	101.7309393	0	14.6352379	0.016328015	0
San Mateo (SF)	2045 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	129.1717914	6233.168372	6233.168372	0	1216.79827	0.965777316	0
San Mateo (SF)	2045 T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	86.50576842	5553.112824	0	5553.112824	814.884338	0	10124.18082
San Mateo (SF)	2045 T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	7.780535514	377.9948308	377.9948308	0	73.2926445	0.064216602	0
San Mateo (SF)	2045 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	146.720538	9341.97414	9341.97414	0	1382.10747	1.437447458	0
San Mateo (SF)	2045 T7 Single Other Class 8	Aggregate	Aggregate	Electricity	93.80750776	8173.085711	0	8173.085711	883.666723	0	14900.79533
San Mateo (SF)	2045 T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	9.481515832	595.0601982	595.0601982	0	89.3158791	0.098592416	0
San Mateo (SF)	2045 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	22.47137709	1457.418555	1457.418555	0	103.368335	0.58673597	0
San Mateo (SF)	2045 T7 SWCV Class 8	Aggregate	Aggregate	Electricity	101.1221977	6548.134381	0	6548.134381	465.162027	0	12183.13604
San Mateo (SF)	2045 T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	144.6834959	9378.68593	9378.68593	0	665.544081	1.71325287	0
San Mateo (SF)	2045 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	299.1915566	19023.22943	19023.22943	0	4447.25332	2.593941903	0
San Mateo (SF)	2045 T7 Tractor Class 8	Aggregate	Aggregate	Electricity	55.94249123	3970.641522	0	3970.641522	812.84441	0	7229.385932
San Mateo (SF)	2045 T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	26.23072433	1656.706532	1656.706532	0	381.132425	0.280985336	0
San Mateo (SF)	2045 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	4.089904555	166.6815224	166.6815224	0	52.5307783	0.02600444	0
San Mateo (SF)	2045 T7 Utility Class 8	Aggregate	Aggregate	Electricity	2.582295859	123.1564392	0	123.1564392	31.181387	0	232.6468251
San Mateo (SF)	2045 T7T5	Aggregate	Aggregate	Gasoline	1.263756702	102.237959	102.237959	0	25.2852441	0.021854943	0
San Mateo (SF)	2045 T7T5	Aggregate	Aggregate	Electricity	0.827541227	103.1176931	0	103.1176931	16.5574449	0	207.1978741
San Mateo (SF)	2045 UBUS	Aggregate	Aggregate	Gasoline	61.32463934	4000.606693	4000.606693	0	245.299357	0.396322218	0
San Mateo (SF)	2045 UBUS	Aggregate	Aggregate	Electricity	394.3821564	31125.86098	0	31125.86098	1577.52863	0	54259.9741

# We Can Model Regional Emissions, But Are the Results Meaningful for CEQA?

Authors: AEP Climate Change Committee (Michael Hendrix, Dave Mitchell, Haseeb Qureshi, Jennifer Reed, Brian Schuster, Nicole Vermillion, and Rich Walters)

On December 24, 2018, the California Supreme Court, *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5th 502, Case No. S219783 (*Friant Ranch*), held that simply identifying that a project exceeds an emissions threshold is not sufficient to identify a project's significant effect on the environment relative to the health effects of project emissions. The Court found that an EIR should make a reasonable effort to substantively connect a project's criteria pollutant emissions to likely health consequences, or explain why it is not currently feasible to provide such an analysis. In 2019, there were several CEQA documents that included health effects modeling to provide additional analysis for projects with criteria air pollutant emissions that exceed a significance threshold. While it is technically possible to conduct this modeling, we argue that this additional layer of quantitative analysis may not always provide decision-makers and the public with additional meaningful information. It is the air districts that are best suited to provide frameworks for how to identify health effects of regional criteria pollutant emissions under CEQA.

## Introduction

Significance thresholds for regional criteria pollutants used by California air districts and lead agencies represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard (AAQS). By analyzing the project's emissions against these thresholds, the CEQA document assesses whether these emissions directly contribute to any regional or local exceedances of the applicable AAQS and exposure levels. The basis of the ruling in *Friant Ranch* was that the EIR did not provide a meaningful analysis of the adverse health effects that would be associated with the project's criteria pollutant emissions, which were identified as being far above the relevant thresholds. The discussion of the adverse health effects in the EIR was general in nature and did not connect the levels of the pollutants that would be emitted by the project to adverse health effects.

The process of correlating project-related criteria pollutant emissions to health-based consequences is called a health impact assessment (HIA). An HIA involves two steps: 1) running a regional photochemical grid model (PGM) to estimate the small increases in concentrations of ozone and particulate matter (PM) in the region as a result of a project's emissions of criteria and precursor pollutants; and 2) running the U.S. EPA Benefits Mapping and Analysis Program (BenMAP) to estimate the resulting health impacts from these increases in concentrations of ozone and PM.

## Limitations of Regional-Scale Dispersion Models

It is technically feasible to conduct regional-scale criteria pollutant modeling for a development project. Particulate matter (PM) can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur oxides (SO<sub>x</sub>) and NO<sub>x</sub>. Ozone (O<sub>3</sub>) is a secondary pollutant formed from the oxidation of reactive organic gases (ROGs) and nitrogen oxides (NO<sub>x</sub>) in the presence of sunlight. Rates of ozone formation are a function of a variety of complex physical factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Secondary formation of PM and ozone can occur far from the original emissions source from regional transport due to wind and topography (e.g. low-level jet stream). As such, modeling concentrations of secondary PM and ozone require photochemical grid models (PGMs), such as CMAQ and CAMx. These models have a much larger "grid" system and much lower resolution than localized dispersion modeling (e.g., AERMOD). For example, common grid cells in PGMs are 4x4 kilometers, while AERMOD can identify concentrations at the meter-level.

Photochemical modeling also depends on all emission sources in the entire domain. Low resolution and spatial averaging produces “noise” and model uncertainty that can exceed a project’s specific emissions. Additionally, regional-scale models are highly contingent upon background concentrations. Factors such as meteorology and topography greatly affect the certainty levels of predicted concentrations at receptor points. As a result, there are statistical ranges of uncertainty through all the modeling steps. Due to these factors, it is difficult to predict ground-level secondary PM and ozone concentrations associated with relatively small emission sources with a high degree of certainty. While it is possible to use a regional-scale model to predict these regional concentrations, when a project’s emissions are less than the regional model’s resolution, the resultant ambient air quality concentrations will be within the margin of uncertainty. In CEQA terms, this would fit the definition of “speculative”. Only when the scale of emissions would result in changes in ambient air quality beyond the model margin of uncertainty would the results not be “speculative” as defined by CEQA.

## **Identifying Health Effects due to Ambient Air Quality Changes**

BenMap is a model developed by the USEPA to understand the health effects from changes in ozone and PM concentrations. If there is an acceptable level of confidence that the results provided by the regional dispersion modeling are valid, then these concentrations can be translated into health outcomes using BenMap. The health outcomes in BenMap are based on changes in ambient air concentrations and the population exposed to these changes. Data provided by this analysis may indicate increased number of workdays lost to illness, hospital admissions (respiratory), emergency room visits (asthma), or mortality, among other health effects. These are called “health incidences.”

Translating the incremental increase in PM and ozone concentrations to specific health effects is also subject to uncertainty. For example, regional models assign the same toxicity to PM regardless of the source of PM (such as road dust as exhaust), and thus potentially overpredict adverse health effects of PM. BenMap also assumes that health effects can occur at any concentration, including small incremental concentrations, and assumes that impacts seen at large concentration differences can be linearly scaled down to small increases in concentration, with no consideration of potential thresholds below which health impacts may not occur. Additionally, BenMap is used for assessing impacts over large areas and populations and was not intended to be used for individual projects. For health incidences, the number of hospitalizations or increase in morbidity predicted by BenMap is greatly affected by the population characteristics.<sup>1</sup> Small increases in emissions in an area with a high population have a much greater affect than large increases in emissions over an area with a small population. As a result, the same amount of emissions generated in an urban area could result in greater health consequences than if the same emissions occurred on the urban periphery, where fewer people may be affected. This will also depend on other factors including meteorology and photochemistry, as discussed above. Emissions in areas with conditions that favor high air dispersion or unfavorable ozone formation will likely have relatively lower effects on ambient air quality and health outcomes.

While BenMap provides additional statistical information about health consequences requested by the Court in the Friant Ranch decision, this information is only meaningful when presented with the full health context of the region or locality at hand. For example, if the BenMap analysis says that the project would result in two additional hospital admissions, this result alone is not useful unless one identifies how many hospital admissions are caused by poor air quality now (without the project) and how many hospital admissions occur

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<sup>1</sup> BenMap assigns prevalence rate for asthma and other health effects based on indicators such as gender, race, age, ethnicity, etc. The BenMap user manual specifically states that there are a wide range of variables that can be included in the health effect function. The health effect function was developed based on epidemiological studies, and specifically states that “there are a number of issues that arise when deriving and choosing between health effect functions that go well beyond this user manual. Hence, it is important to have a trained health researcher assist in developing the impact function data file.”

overall (due to air quality and other causes). Because health is not solely influenced by ambient air quality, and has many factors that are highly variable across geographies and populations, there is an added level of uncertainty in using a generalized identification of health effects due to air quality conditions overlaid onto a specific diverse set of health conditions and other factors. Regardless of the uncertainty levels, if regional health effects are identified for a project, then the CEQA analysis needs to provide a full health baseline for decision-makers and the public to be able to understand the marginal change due to project criteria pollutant emissions. Given the margin of uncertainty at each step in the process (regional scale modeling, existing ambient air quality effects on health, population health conditions vulnerability, and marginal health effects of air pollution), the identification of marginal health effects due to individual projects using regional air quality modelling and tools such as BenMap are likely to be within the level of uncertainty and thus defined as “speculative” per CEQA.

## The Role of Air Districts

Regional, community, multiscale air quality modeling conducted by the air districts for each individual air basin or locality within the air basin would be the most appropriate indicator of health effects for projects. The AQMPs provide a forecast of regional emissions based on regional dispersion modeling for all sources within the air basin. Regional-scale models attempt to account for all emissions sources within an air basin.

The regional scale model requires inputs such as existing and future regional sources of pollutants and global meteorological data, which are generally not accessible by CEQA practitioners. Modeling of future years should consider future concentrations of air pollutants based on regional growth projections and existing programs, rules, and regulations adopted by Federal, State, and local air districts. In general, air pollution in California is decreasing as a result of Federal and State laws. Based on the air quality management plans (AQMPs) required for air districts in a nonattainment area, air quality in the air basins are anticipated to improve despite an increase in population and employment growth. Air districts are charged with assessing programs, rules, and regulations so that the increase in population and employment does not conflict with the mandate to achieve the AAQS. Because emissions forecasting and health outcomes based on the regional growth projections to achieve the AAQS is under the purview of the air districts, it should also fall on the air districts to identify the potential health outcomes associated with individual project's criteria pollutant emissions.

The South Coast Air Quality Management District (South Coast AQMD) and the Sacramento Metropolitan Air Quality Management District (Sacramento Metropolitan AQMD) are exploring concepts for project-level analysis in light of Friant Ranch to assist local lead agencies.

- » South Coast AQMD is looking at the largest land use development project they have had in the air basin and doing a sensitivity analysis (using CAMx for photochemical grid modeling and BenMap for health outcomes) to see how locating a very large project in different parts of the air basin (Los Angeles, Inland Empire, v. Orange County) would affect the health incidence.
- » Sacramento Metropolitan AQMD is also looking at a screening process. Rather than looking at the upper end (i.e., largest project in the air basin), Sacramento Metropolitan AQMD is starting at the smallest project that exceeds the regional significance threshold and running CAMx and BenMap at different locations in the air basin to see how it affects regional health incidences.

Guidance from Air Districts would be the most effective way to incorporate meaningful information concerning regional health effects of project criteria pollutants in CEQA analyses, including guidance as to when modelling is and is not useful and meaningful, how modelling should be conducted, and how to best present additional information to inform decision-makers and the public about a project's impacts.

## **So...until air districts do their part, what should we do?**

### **PROJECTS WITH CRITERIA POLLUTANT EMISSIONS BELOW AIR DISTRICT THRESHOLDS**

The Friant Ranch ruling was about providing disclosure of health effects of project emissions that were well over the significance thresholds. Since the air district thresholds are tied to a level the air districts find to not have a significant effect on ambient air quality, there should be no need to discuss the health effects of criteria pollutant emissions that are less than the significance thresholds.

### **PROJECTS WITH CRITERIA POLLUTANT EMISSIONS ABOVE AIR DISTRICT THRESHOLDS**

Pursuant to Section 15125 of the CEQA Guidelines, the environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. For CEQA, the health effects associated with buildout of a project would occur at the project's horizon year. Because CEQA requires an analysis of the change from existing conditions, the change in effects would be associated with changes in ambient air quality and associated health outcomes between existing conditions and the project's horizon year. Therefore, in order to show how a project affects health outcomes in an air basin, the CEQA documents will need to qualitatively or quantitatively address: (1) existing ambient criteria pollutant concentrations, health incidences due to existing air quality, and health incidences overall; 2) future (without project) ambient criteria pollutant concentrations and health incidences, and 3) future (with project) ambient criteria pollutant concentrations and health incidences.

Projects with significant criteria pollutant emissions could use regional modelling and BenMap to identify health effects of project emissions, but it is likely that many (or most) projects that are not regionally substantial in scale will be shown to have minimal regional changes in PM and ozone concentrations and therefore minimal changes in associated health effects. In addition, many projects may have emissions that are less than the uncertainty level of regional air quality models and BenMap health effects modeling; in these cases, quantitative results will not be meaningful. Thus, absent better direction from air districts, CEQA lead agencies will have to determine on a case by case basis whether a qualitative discussion of health effects will suffice, or whether regional modeling, despite its limitations, should be conducted for the project.

Where a project has substantial criteria pollutant emissions when considered on a regional scale, and there is reason to believe that the modeling of ambient air quality and regional health effects would produce non-speculative results when considering modeling uncertainties, then CEQA lead agencies should use regional modelling.

## **Conclusion**

The purpose of CEQA is to inform the public as to the potential for a project to result in one or more significant adverse effects on the environment (including health effects). A CEQA document must provide an understandable and clear environmental analysis and provide an adequate basis for decision making and public disclosure. Regional dispersion modeling of criteria pollutants and secondary pollutants like PM and ozone can provide additional information, but that information may be within the margin of modelling uncertainty and/or may not be meaningful for the public and decision-makers unless a full health context is presented in the CEQA document. Simply providing health outcomes based on use of a regional-scale model and BenMap may not satisfy the goal to provide decision-makers and the public with information that would assist in weighting the environmental consequences of a project. A CEQA document must provide an analysis that is understandable for decision making and public disclosure. Regional scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation.

In order to accurately connect the dots, we urge California air districts to provide more guidance on how to identify and describe the health effects of exceeding regional criteria pollutant thresholds. The air districts are the primary agency responsible for ensuring that the air basins attain the AAQS and ensure the health and welfare of its residents relative to air quality. Because emissions forecasting and health outcomes are based on the regional growth projections to achieve the AAQS is under the purview of the air districts, it should fall on the air districts to identify the potential health outcomes associated with exceeding the CEQA thresholds for projects. The air districts should provide lead agencies with a consistent, reliable, and meaningful analytical approach to correlate specific health effects that may result from a project's criteria pollutant emissions.

## **Glossary**

AAQS – Ambient Air Quality Standards

BenMap – Benefits Mapping and Analysis Program

CAMx – Comprehensive Air Quality Model with extensions

CMAQ – Community Multiscale Air Quality

NOx – Nitrogen Oxides

PM – Particulate Matter

SOx – Sulfur Oxides

State – California

USEPA – United States Environmental Protection Agency



**S219783**

**IN THE SUPREME COURT OF CALIFORNIA**

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**SIERRA CLUB, REVIVE THE SAN JOAQUIN, and  
LEAGUE OF WOMEN VOTERS OF FRESNO,**

**Plaintiffs and Appellants,**

**v.**

**COUNTY OF FRESNO,**

**Defendant and Respondent,**

**and,**

**FRIANT RANCH, L.P.,**

**Real Party in Interest and Respondent.**

SUPREME COURT  
FILED

APR 13 2015

Frank A. McGuire Clerk  
Deputy

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After a Published Decision by the Court of Appeal, filed May 27, 2014  
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno  
Case No. 11CECG00726  
Honorable Rosendo A. Pena, Jr.

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**APPLICATION OF THE SOUTH COAST AIR QUALITY  
MANAGEMENT DISTRICT FOR LEAVE TO FILE  
BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY  
AND [PROPOSED] BRIEF OF *AMICUS CURIAE***

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**CLERK SUPREME COURT**

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**TO THE HONORABLE CHIEF JUSTICE AND JUSTICES OF THE  
SUPREME COURT:**

**APPLICATION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF**

Pursuant to Rule 8.520(f) of the California Rules of Court, the South Coast Air Quality Management District (SCAQMD) respectfully requests leave to file the attached *amicus curiae* brief. Because SCAQMD's position differs from that of either party, we request leave to submit this amicus brief in support of neither party.

**HOW THIS BRIEF WILL ASSIST THE COURT**

SCAQMD's proposed amicus brief takes a position on two of the issues in this case. In both instances, its position differs from that of either party. The issues are:

- 1) Does the California Environmental Quality Act (CEQA) require an environmental impact report (EIR) to correlate a project's air pollution emissions with specific levels of health impacts?
- 2) What is the proper standard of review for determining whether an EIR provides sufficient information on the health impacts caused by a project's emission of air pollutants?

This brief will assist the Court by discussing the practical realities of correlating identified air quality impacts with specific health outcomes. In short, CEQA requires agencies to provide detailed information about a project's air quality impacts that is sufficient for the public and decisionmakers to adequately evaluate the project and meaningfully understand its impacts. However, the level of analysis is governed by a rule of reason; CEQA only requires agencies to conduct analysis if it is reasonably feasible to do so.

With regard to health-related air quality impacts, an analysis that correlates a project's air pollution emissions with specific levels of health impacts will be feasible in some cases but not others. Whether it is feasible depends on a variety of factors, including the nature of the project and the nature of the analysis under consideration. The feasibility of analysis may also change over time as air districts and others develop new tools for measuring projects' air quality related health impacts. Because SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, it is uniquely situated to express an opinion on the extent to which the Court should hold that CEQA requires lead agencies to correlate air quality impacts with specific health outcomes.

SCAQMD can also offer a unique perspective on the question of the appropriate standard of review. SCAQMD submits that the proper standard of review for determining whether an EIR is sufficient as an informational document is more nuanced than argued by either party. In our view, this is a mixed question of fact and law. It includes determining whether additional analysis is feasible, which is primarily a factual question that should be reviewed under the substantial evidence standard. However, it also involves determining whether the omission of a particular analysis renders an EIR insufficient to serve CEQA's purpose as a meaningful, informational document. If a lead agency has not determined that a requested analysis is infeasible, it is the court's role to determine whether the EIR nevertheless meets CEQA's purposes, and courts should not defer to the lead agency's conclusions regarding the legal sufficiency of an EIR's analysis. The ultimate question of whether an EIR's analysis is "sufficient" to serve CEQA's informational purposes is predominately a question of law that courts should review de novo.



This brief will explain the rationale for these arguments and may assist the Court in reaching a conclusion that accords proper respect to a lead agency's factual conclusions while maintaining judicial authority over the ultimate question of what level of analysis CEQA requires.

#### **STATEMENT OF INTEREST OF *AMICUS CURIAE***

The SCAQMD is the regional agency primarily responsible for air pollution control in the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of the Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410; Cal. Code Regs., tit. 17, § 60104.) The SCAQMD participates in the CEQA process in several ways. Sometimes it acts as a lead agency that prepares CEQA documents for projects. Other times it acts as a responsible agency when it has permit authority over some part of a project that is undergoing CEQA review by a different lead agency. Finally, SCAQMD also acts as a commenting agency for CEQA documents that it receives because it is a public agency with jurisdiction by law over natural resources affected by the project.

In all of these capacities, SCAQMD will be affected by the decision in this case. SCAQMD sometimes submits comments requesting that a lead agency perform an additional type of air quality or health impacts analysis. On the other hand, SCAQMD sometimes determines that a particular type of health impact analysis is not feasible or would not produce reliable and informative results. Thus, SCAQMD will be affected by the Court's resolution of the extent to which CEQA requires EIRs to correlate emissions and health impacts, and its resolution of the proper standard of review.

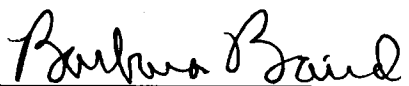
## **CERTIFICATION REGARDING AUTHORSHIP AND FUNDING**

No party or counsel in the pending case authored the proposed amicus curiae brief in whole or in part, or made any monetary contribution intended to fund the preparation or submission of the brief. No person or entity other than the proposed *Amicus Curiae* made any monetary contribution intended to fund the preparation or submission of the brief.

Respectfully submitted,

DATED: April 3, 2015

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## BRIEF OF AMICUS CURIAE

### SUMMARY OF ARGUMENT

The South Coast Air Quality Management District (SCAQMD) submits that this Court should not try to establish a hard-and-fast rule concerning whether lead agencies are required to correlate emissions of air pollutants with specific health consequences in their environmental impact reports (EIR). The level of detail required in EIRs is governed by a few, core CEQA (California Environmental Quality Act) principles. As this Court has stated, “[a]n EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.” (*Laurel Heights Improvement Assn. v. Regents of the Univ of Cal.* (1988) 47 Cal.3d 376, 405 [*“Laurel Heights I”*]) Accordingly, “an agency must use its best efforts to find out and disclose all that it reasonably can.” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 428 (quoting CEQA Guidelines § 15144)<sup>1</sup>). However, “[a]nalysis of environmental effects need not be exhaustive, but will be judged in light of what is reasonably feasible.” (*Association of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1390; CEQA Guidelines §§ 15151, 15204(a).)

With regard to analysis of air quality related health impacts, EIRs must generally quantify a project’s pollutant emissions, but in some cases it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g., premature mortality; hospital admissions). In such cases, a general description of the adverse health impacts resulting from the pollutants at issue may be sufficient. In other cases, due to the magnitude

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<sup>1</sup> The CEQA Guidelines are found at Cal. Code Regs., tit. 14 §§ 15000, *et seq.*

or nature of the pollution emissions, as well as the specificity of the project involved, it may be feasible to quantify health impacts. Or there may be a less exacting, but still meaningful analysis of health impacts that can feasibly be performed. In these instances, agencies should disclose those impacts.

SCAQMD also submits that whether or not an EIR complies with CEQA's informational mandates by providing sufficient, feasible analysis is a mixed question of fact and law. Pertinent here, the question of whether an EIR's discussion of health impacts from air pollution is sufficient to allow the public to understand and consider meaningfully the issues involves two inquiries: (1) Is it feasible to provide the information or analysis that a commenter is requesting or a petitioner is arguing should be required?; and (2) Even if it is feasible, is the agency relying on other policy or legal considerations to justify not preparing the requested analysis? The first question of whether an analysis is feasible is primarily a question of fact that should be judged by the substantial evidence standard. The second inquiry involves evaluating CEQA's information disclosure purposes against the asserted reasons to not perform the requested analysis. For example, an agency might believe that its EIR meets CEQA's informational disclosure standards even without a particular analysis, and therefore choose not to conduct that analysis. SCAQMD submits that this is more of a legal question, which should be reviewed de novo as a question of law.

## **ARGUMENT**

### **I. RELEVANT FACTUAL AND LEGAL FRAMEWORK.**

#### **A. Air Quality Regulatory Background**

The South Coast Air Quality Management District (SCAQMD) is one of the local and regional air pollution control districts and air quality

management districts in California. The SCAQMD is the regional air pollution agency for the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410, 17 Cal. Code Reg. § 60104.) The SCAQMD also includes the Coachella Valley in Riverside County (Palm Springs area to the Salton Sea). (SCAQMD, *Final 2012 AQMP* (Feb. 2013), <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “chapter 7” hyperlink; pp 7-1, 7-3 (last visited Apr. 1, 2015).) The SCAQMD's jurisdiction includes over 16 million residents and has the worst or nearly the worst air pollution levels in the country for ozone and fine particulate matter. (SCAQMD, *Final 2012 AQMP* (Feb. 2013), <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Executive Summary” hyperlink p. ES-1 (last visited Apr. 1, 2015).)

Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. (Health & Saf. Code § 40000.) The California Air Resources Board (CARB), part of the California Environmental Protection Agency, is primarily responsible for controlling pollution from motor vehicles. (*Id.*) The air districts must adopt rules to achieve and maintain the state and federal ambient air quality standards within their jurisdictions. (Health & Saf. Code § 40001.)

The federal Clean Air Act (CAA) requires the United States Environmental Protection Agency (EPA) to identify pollutants that are widely distributed and pose a threat to human health, developing a so-called “criteria” document. (42 U.S.C. § 7408; CAA § 108.) These pollutants are frequently called “criteria pollutants.” EPA must then establish “national ambient air quality standards” at levels “requisite to protect public health”,

allowing “an adequate margin of safety.” (42 U.S.C. § 7409; CAA § 109.) EPA has set standards for six identified pollutants: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter (PM), and lead. (U.S. EPA, National Ambient Air Quality Standards (NAAQS), <http://www.epa.gov/air/criteria.html> (last updated Oct. 21, 2014).)<sup>2</sup>

Under the Clean Air Act, EPA sets emission standards for motor vehicles and “nonroad engines” (mobile farm and construction equipment, marine vessels, locomotives, aircraft, etc.). (42 U.S.C. §§ 7521, 7547; CAA §§ 202, 213.) California is the only state allowed to establish emission standards for motor vehicles and most nonroad sources; however, it may only do so with EPA's approval. (42 U.S.C. §§ 7543(b), 7543(e); CAA §§ 209(b), 209(c).) Sources such as manufacturing facilities, power plants and refineries that are not mobile are often referred to as “stationary sources.” The Clean Air Act charges state and local agencies with the primary responsibility to attain the national ambient air quality standards. (42 U.S.C. § 7401(a)(3); CAA § 101(a)(3).) Each state must adopt and implement a plan including enforceable measures to achieve and maintain the national ambient air quality standards. (42 U.S.C. § 7410; CAA § 110.) The SCAQMD and CARB jointly prepare portion of the plan for the South Coast Air Basin and submit it for approval by EPA. (Health & Saf. Code §§ 40460, et seq.)

The Clean Air Act also requires state and local agencies to adopt a permit program requiring, among other things, that new or modified “major” stationary sources use technology to achieve the “lowest achievable emission rate,” and to control minor stationary sources as

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<sup>2</sup> Particulate matter (PM) is further divided into two categories: fine particulate or PM<sub>2.5</sub> (particles with a diameter of less than or equal to 2.5 microns) and coarse particulate (PM<sub>10</sub>) (particles with a diameter of 10 microns or less). (U.S. EPA, Particulate Matter (PM), <http://www.epa.gov/airquality/particulatepollution/> (last visited Apr. 1, 2015).)

needed to help attain the standards. (42 U.S.C. §§ 7502(c)(5), 7503(a)(2), 7410(a)(2)(C); CAA §§ 172(c)(5), 173(a)(2), 110(a)(2)(C).) The air districts implement these permit programs in California. (Health & Saf. Code §§ 42300, et seq.)

The Clean Air Act also sets out a regulatory structure for over 100 so-called “hazardous air pollutants” calling for EPA to establish “maximum achievable control technology” (MACT) for sources of these pollutants. (42 U.S.C. § 7412(d)(2); CAA § 112(d)(2).) California refers to these pollutants as “toxic air contaminants” (TACs) which are subject to two state-required programs. The first program requires “air toxics control measures” for specific categories of sources. (Health & Saf. Code § 39666.) The other program requires larger stationary sources and sources identified by air districts to prepare “health risk assessments” for impacts of toxic air contaminants. (Health & Saf. Code §§ 44320(b), 44322, 44360.) If the health risk exceeds levels identified by the district as “significant,” the facility must implement a “risk reduction plan” to bring its risk levels below “significant” levels. Air districts may adopt additional more stringent requirements than those required by state law, including requirements for toxic air contaminants. (Health & Saf. Code § 41508; *Western Oil & Gas Assn. v. Monterey Bay Unified APCD* (1989) 49 Cal.3d 408, 414.) For example, SCAQMD has adopted a rule requiring new or modified sources to keep their risks below specified levels and use best available control technology (BACT) for toxics. (SCAQMD, *Rule 1401-New Source Review of Toxic Air Contaminants*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiv>; then follow “Rule 1401” hyperlink (last visited Apr. 1, 2015).)

## **B. The SCAQMD's Role Under CEQA**

The California Environmental Quality Act (CEQA) requires public agencies to perform an environmental review and appropriate analysis for projects that they implement or approve. (Pub. Resources Code § 21080(a).) The agency with primary approval authority for a particular project is generally the “lead agency” that prepares the appropriate CEQA document. (CEQA Guidelines §§ 15050, 15051.) Other agencies having a subsequent approval authority over all or part of a project are called “responsible” agencies that must determine whether the CEQA document is adequate for their use. (CEQA Guidelines §§ 15096(c), 15381.) Lead agencies must also consult with and circulate their environmental impact reports to “trustee agencies” and agencies “with jurisdiction by law” including “authority over resources which may be affected by the project.” (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines §§ 15086(a)(3), 15073(c).) The SCAQMD has a role in all these aspects of CEQA.

Fulfilling its responsibilities to implement its air quality plan and adopt rules to attain the national ambient air quality standards, SCAQMD adopts a dozen or more rules each year to require pollution reductions from a wide variety of sources. The SCAQMD staff evaluates each rule for any adverse environmental impact and prepares the appropriate CEQA document. Although most rules reduce air emissions, they may have secondary environmental impacts such as use of water or energy or disposal of waste—e.g., spent catalyst from control equipment.<sup>3</sup>

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<sup>3</sup> The SCAQMD's CEQA program for its rules is a “Certified Regulatory Program” under which it prepares a “functionally equivalent” document in lieu of a negative declaration or EIR. (Pub. Resources Code § 21080.5, CEQA Guidelines § 15251(l).)



The SCAQMD also approves a large number of permits every year to construct new, modified, or replacement facilities that emit regulated air pollutants. The majority of these air pollutant sources have already been included in an earlier CEQA evaluation for a larger project, are currently being evaluated by a local government as lead agency, or qualify for an exemption. However, the SCAQMD sometimes acts as lead agency for major projects where the local government does not have a discretionary approval. In such cases, SCAQMD prepares and certifies a negative declaration or environmental impact report (EIR) as appropriate.<sup>4</sup> SCAQMD evaluates perhaps a dozen such permit projects under CEQA each year. SCAQMD is often also a “responsible agency” for many projects since it must issue a permit for part of the projects (e.g., a boiler used to provide heat in a commercial building). For permit projects evaluated by another lead agency under CEQA, SCAQMD has the right to determine that the CEQA document is inadequate for its purposes as a responsible agency, but it may not do so because its permit program already requires all permitted sources to use the best available air pollution control technology. (SCAQMD, *Rule 1303(a)(1) – Requirements*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiii>; then follow “Rule 1303” hyperlink (last visited Apr. 1, 2015).)

Finally, SCAQMD receives as many as 60 or more CEQA documents each month (around 500 per year) in its role as commenting agency or an agency with “jurisdiction by law” over air quality—a natural resource affected by the project. (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines § 15366(a)(3).) The SCAQMD staff provides comments on as many as 25 or 30 such documents each month.

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<sup>4</sup> The SCAQMD's permit projects are not included in its Certified Regulatory Program, and are evaluated under the traditional local government CEQA analysis. (Pub. Resources Code §§ 21150-21154.)

(SCAQMD Governing Board Agenda, Apr. 3, 2015, Agenda Item 16, Attachment A, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-april-3-2015>; then follow “16. Lead Agency Projects and Environmental Documents Received by SCAQMD” hyperlink (last visited Apr. 1, 2015).) Of course, SCAQMD focuses its commenting efforts on the more significant projects.

Typically, SCAQMD comments on the adequacy of air quality analysis, appropriateness of assumptions and methodology, and completeness of the recommended air quality mitigation measures. Staff may comment on the need to prepare a health risk assessment detailing the projected cancer and noncancer risks from toxic air contaminants resulting from the project, particularly the impacts of diesel particulate matter, which CARB has identified as a toxic air contaminant based on its carcinogenic effects. (California Air Resources Board, Resolution 98-35, Aug. 27, 1998, <http://www.arb.ca.gov/regact/diesltac/diesltac.htm>; then follow Resolution 98-35 hyperlink (last visited Apr. 1, 2015).) Because SCAQMD already requires new or modified stationary sources of toxic air contaminants to use the best available control technology for toxics and to keep their risks below specified levels, (SCAQMD Rule 1401, *supra*, note 15), the greatest opportunity to further mitigate toxic impacts through the CEQA process is by reducing emissions—particularly diesel emissions—from vehicles.

**II. THIS COURT SHOULD NOT SET A HARD-AND-FAST RULE CONCERNING THE EXTENT TO WHICH AN EIR MUST CORRELATE A PROJECT’S EMISSION OF POLLUTANTS WITH RESULTING HEALTH IMPACTS.**

Numerous cases hold that courts do not review the correctness of an EIR’s conclusions but rather its sufficiency as an informative document. (*Laurel Heights 1*, *supra*, 47 Cal.3d at p. 392; *Citizens of Goleta Valley v.*

*Bd. of Supervisors* (1990) 52 Cal.3d 553, 569; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197.)

As stated by the Court of Appeal in this case, where an EIR has addressed a topic, but the petitioner claims that the information provided about that topic is insufficient, courts must “draw[] a line that divides *sufficient* discussions from those that are *insufficient*.” (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4<sup>th</sup> 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) The Court of Appeal readily admitted that “[t]he terms themselves – sufficient and insufficient – provide little, if any, guidance as to where the line should be drawn. They are simply labels applied once the court has completed its analysis.” (*Id.*)

The CEQA Guidelines, however, provide guidance regarding what constitutes a sufficient discussion of impacts. Section 15151 states that “the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible.” Case law reflects this: “Analysis of environmental effects need not be exhaustive, but will be judged in light of what was reasonably feasible.” (*Association of Irrigated Residents v. County of Madera, supra*, 107 Cal.App.4th at p. 1390; see also CEQA Guidelines § 15204(a).)

Applying this test, this Court cannot realistically establish a hard-and-fast rule that an analysis correlating air pollution impacts of a project to quantified resulting health impacts is always required, or indeed that it is never required. Simply put, in some cases such an analysis will be “feasible”; in some cases it will not.

For example, air pollution control districts often require a proposed new source of toxic air contaminants to prepare a “health risk assessment” before issuing a permit to construct. District rules often limit the allowable cancer risk the new source may cause to the “maximally exposed individual” (worker and residence exposures). (See, e.g., SCAQMD Rule 1401(c)(8); 1401(d)(1), *supra* note 15.) In order to perform this analysis, it

is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). (SCAQMD, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588)*, pp. 11-16; (last visited Apr. 1, 2015) [http://www.aqmd.gov/home/library/documents-support-material](http://www.aqmd.gov/home/library/documents-support-material;); "Guidelines" hyperlink; AB2588; then follow AB2588 Risk Assessment Guidelines hyperlink.)

Thus, it is feasible to determine the health risk posed by a new gas station locating at an intersection in a mixed use area, where receptor locations are known. On the other hand, it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk—it does not necessarily mean anyone will contract cancer as a result of the project.

In order to find the "cancer burden" or expected additional cases of cancer resulting from the project, it is also necessary to know the numbers and location of individuals living within the "zone of impact" of the project: i.e., those living in areas where the projected cancer risk from the project exceeds one in a million. (SCAQMD, Health Risk Assessment Summary form, <http://www.aqmd.gov/home/forms>; filter by "AB2588" category; then "Health Risk Assessment" hyperlink (last visited Apr. 1, 2015).) The affected population is divided into bands of those exposed to at least 1 in a million risk, those exposed to at least 10 in a million risk, etc. up to those exposed at the highest levels. (*Id.*) This data allows agencies to calculate an approximate number of additional cancer cases expected from

the project. However, it is not possible to predict which particular individuals will be affected.

For the so-called criteria pollutants<sup>5</sup>, such as ozone, it may be more difficult to quantify health impacts. Ozone is formed in the atmosphere from the chemical reaction of the nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) in the presence of sunlight. (U.S. EPA, Ground Level Ozone, <http://www.epa.gov/airquality/ozonepollution/> (last updated Mar. 25, 2015).) It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. (U.S. EPA, *Guideline on Ozone Monitoring Site Selection* (Aug. 1998) EPA-454/R-98-002 § 5.1.2, <http://www.epa.gov/ttnamti1/archive/cpreldoc.html> (last visited Apr. 1, 2015).) NO<sub>x</sub> and VOC are known as “precursors” of ozone.

Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes. (U.S. EPA, *Health Effects of Ozone in the General Population*, Figure 9, <http://www.epa.gov/apti/ozonehealth/population.html#levels> (last visited Apr. 1, 2015).) However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP showed that reducing NO<sub>x</sub> by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. (South Coast Air Quality Management District, *Final 2012 AQMP* (February 2013), <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Appendix V: Modeling & Attainment Demonstrations” hyperlink,

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<sup>5</sup> See discussion of types of pollutants, *supra*, Part I.A.

pp. v-4-2, v-7-4, v-7-24.) SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO<sub>x</sub> or VOC emissions from relatively small projects.

On the other hand, this type of analysis may be feasible for projects on a regional scale with very high emissions of NO<sub>x</sub> and VOCs, where impacts are regional. For example, in 2011 the SCAQMD performed a health impact analysis in its CEQA document for proposed Rule 1315, which authorized various newly-permitted sources to use offsets from the districts “internal bank” of emission reductions. This CEQA analysis accounted for essentially *all* the increases in emissions due to new or modified sources in the District between 2010 and 2030.<sup>6</sup> The SCAQMD was able to correlate this very large emissions increase (e.g., 6,620 pounds per day NO<sub>x</sub> (1,208 tons per year), 89,180 pounds per day VOC (16,275 tons per year)) to expected health outcomes from ozone and particulate matter (e.g., 20 premature deaths per year and 89,947 school absences in the year 2030 due to ozone).<sup>7</sup> (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System* (see hyperlink in fn 6) at p. 4.1-35, Table 4.1-29.)

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<sup>6</sup> (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, Attachment G, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System, Vol. 1, p.4.0-6*, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-february-4-2011>; the follow “26. Adopt Proposed Rule 1315 – Federal New Source Review Tracking System” (last visited April 1, 2015).)

<sup>7</sup> The SCAQMD was able to establish the location of future NO<sub>x</sub> and VOC emissions by assuming that new projects would be built in the same locations and proportions as existing stationary sources. This CEQA document was upheld by the Los Angeles County Superior Court in *Natural Res. Def. Council v SCAQMD*, Los Angeles Superior Court No. BS110792).

However, a project emitting only 10 tons per year of NO<sub>x</sub> or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO<sub>x</sub> with specific health impacts from ozone. This is in part because ozone formation is not linearly related to emissions. Ozone impacts vary depending on the location of the emissions, the location of other precursor emissions, meteorology and seasonal impacts, and because ozone is formed some time later and downwind from the actual emission. (EPA Guideline on Ozone Monitoring Site Selection (Aug. 1998) EPA-454/R-98-002, § 5.1.2; <https://www.epa.gov/ttnamti1/archive/cpreldoc.html>; then search “Guideline on Ozone Monitoring Site Selection” click on pdf) (last viewed Apr. 1, 2015).)

SCAQMD has set its CEQA “significance” threshold for NO<sub>x</sub> and VOC at 10 tons per year (expressed as 55 lb/day). (SCAQMD, *Air Quality Analysis Handbook*, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook>; then follow “SCAQMD Air Quality Significance Thresholds” hyperlink (last visited Apr. 1, 2015).) This is because the federal Clean Air Act defines a “major” stationary source for “extreme” ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year. (42 U.S.C. §§ 7511a(e), 7511a(f); CAA §§ 182(e), 182(f).) Under the Clean Air Act, such sources are subject to enhanced control requirements (42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173), so SCAQMD decided this was an appropriate threshold for making a CEQA “significance” finding and requiring feasible mitigation. Essentially, SCAQMD takes the position that a source that emits 10 tons/year of NO<sub>x</sub> or VOC would contribute cumulatively to ozone formation. Therefore, lead agencies that use SCAQMD’s thresholds of significance may determine

that many projects have “significant” air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health impacts, unless the emissions are sufficiently high to use a regional modeling program.

In the case of particulate matter (PM<sub>2.5</sub>)<sup>8</sup>, another “criteria” pollutant, SCAQMD staff is aware of two possible methods of analysis. SCAQMD used regional modeling to predict expected health impacts from its proposed Rule 1315, as mentioned above. Also, the California Air Resources Board (CARB) has developed a methodology that can predict expected mortality (premature deaths) from large amounts of PM<sub>2.5</sub>. (California Air Resources Board, *Health Impacts Analysis: PM Premature Death Relationship*, [http://www.arb.ca.gov/research/health/pm-mort/pm-mort\\_arch.htm](http://www.arb.ca.gov/research/health/pm-mort/pm-mort_arch.htm) (last reviewed Jan. 19, 2012).) SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1837 lbs/day). (Final Environmental Assessment for Rule 1315, *supra*, pp 4.0-12, 4.1-13, 4.1-37 (e.g., 125 premature deaths in the entire SCAQMD in 2030), 4.1-39 (0.05 to 1.77 annual premature deaths from power plants.) Again, this project involved large amounts of additional PM<sub>2.5</sub> in the District, up to 2.82 tons/day (5,650 lbs/day of PM<sub>2.5</sub>, or, or 1029 tons/year. (*Id.* at table 4.1-4, p. 4.1-10.)

However, the primary author of the CARB methodology has reported that this PM<sub>2.5</sub> health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties.<sup>9</sup> (SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren*

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<sup>8</sup> SCAQMD has not attained the latest annual or 24-hour national ambient air quality standards for “PM<sub>2.5</sub>” or particulate matter less than 2.5 microns in diameter.

<sup>9</sup> Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts. (*Id.* at p. 2-24.)



*E&P, Inc. WTU Central Facility, New Equipment Project* (certified July 19, 2011), <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-permit-projects/permit-project-documents---year-2011>; then follow “Final Subsequent Mitigated Negative Declaration for Warren E&P Inc. WTU Central Facility, New Equipment Project” hyperlink, pp. 2-22, 2-23 (last visited Apr. 1, 2015).) Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small PM<sub>2.5</sub> increases (3.8 lb/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated PM<sub>2.5</sub> emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so. (*Id.* at pp 2-22 to 2-24.) SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information. (*Id.* at pp. 2-23, 2-25.) This CEQA document was not challenged in court.

In the above case, while it may have been technically possible to plug the data into the methodology, the results would not have been reliable or meaningful. SCAQMD believes that an agency should not be required to perform analyses that do not produce reliable or meaningful results. This Court has already held that an agency may decline to use even the “normal” “existing conditions” CEQA baseline where to do so would be misleading or without informational value. (*Neighbors for Smart Rail v. Exposition Metro Line* (2013) 57 Cal.4th 439, 448, 457.) The same should be true for a decision that a particular study or analysis would not provide reliable or meaningful results.<sup>10</sup>

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<sup>10</sup> Whether a particular study would result in “informational value” is a part of deciding whether it is “feasible.” CEQA defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and

Therefore, it is not possible to set a hard-and-fast rule on whether a correlation of air quality impacts with specific quantifiable health impacts is required in all cases. Instead, the result turns on whether such an analysis is reasonably feasible in the particular case.<sup>11</sup> Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths. (California Air Resources Board, *Health Impacts Analysis: PM Mortality Relationship*, <http://www.arb.ca.gov/research/health/pm-mort/pm-mort.htm> (last reviewed Dec. 29, 2010).) This factor also counsels against setting any hard-and-fast rule in this case.

### **III. THE QUESTION OF WHETHER AN EIR CONTAINS SUFFICIENT ANALYSIS TO MEET CEQA'S REQUIREMENTS IS A MIXED QUESTION OF FACT AND LAW GOVERNED BY TWO DIFFERENT STANDARDS OF REVIEW.**

#### **A. Standard of Review for Feasibility Determination and Sufficiency as an Informative Document**

A second issue in this case is whether courts should review an EIR's informational sufficiency under the "substantial evidence" test as argued by Friant Ranch or the "independent judgment" test as argued by Sierra Club.

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technological factors." (Pub. Resources Code § 21061.1.) A study cannot be "accomplished in a *successful* manner" if it produces unreliable or misleading results.

<sup>11</sup> In this case, the lead agency did not have an opportunity to determine whether the requested analysis was feasible because the comment was non-specific. Therefore, SCAQMD suggests that this Court, after resolving the legal issues in the case, direct the Court of Appeal to remand the case to the lead agency for a determination of whether the requested analysis is feasible. Because Fresno County, the lead agency, did not seek review in this Court, it seems likely that the County has concluded that at least some level of correlation of air pollution with health impacts is feasible.

As this Court has explained, “a reviewing court must adjust its scrutiny to the nature of the alleged defect, depending on whether the claim is predominantly one of improper procedure or a dispute over the facts.” (*Vineyard Area Citizens v. City of Rancho Cordova*, *supra*, 40 Cal.4th at 435.) For questions regarding compliance with proper procedure or other legal questions, courts review an agency’s action de novo under the “independent judgment” test. (*Id.*) On the other hand, courts review factual disputes only for substantial evidence, thereby “accord[ing] greater deference to the agency’s substantive factual conclusions.” (*Id.*)

Here, Friant Ranch and Sierra Club agree that the case involves the question of whether an EIR includes sufficient information regarding a project’s impacts. However, they disagree on the proper standard of review for answering this question: Sierra Club contends that courts use the independent judgment standard to determine whether an EIR’s analysis is sufficient to meet CEQA’s informational purposes,<sup>12</sup> while Friant Ranch contends that the substantial evidence standard applies to this question.

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<sup>12</sup> Sierra Club acknowledges that courts use the substantial evidence standard when reviewing predicate factual issues, but argues that courts ultimately decide as a matter of law what CEQA requires. (Answering Brief, pp. 14, 23.)

SCAQMD submits that the issue is more nuanced than either party contends. We submit that, whether a CEQA document includes sufficient analysis to satisfy CEQA's informational mandates is a mixed question of fact and law,<sup>13</sup> containing two levels of inquiry that should be judged by different standards.<sup>14</sup>

The state CEQA Guidelines set forth standards for the adequacy of environmental analysis. Guidelines Section 15151 states:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

In this case, the basic question is whether the underlying analysis of air quality impacts made the EIR "sufficient" as an informative document. However, whether the EIR's analysis was sufficient is judged in light of what was reasonably feasible. This represents a mixed question of fact and law that is governed by two different standards of review.

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<sup>13</sup> Friant Ranch actually states that the claim that an EIR lacks sufficient relevant information is, "most properly thought of as raising mixed questions of fact and law." (Opening Brief, p. 27.) However, the remainder of its argument claims that the court should apply the substantial evidence standard of review to all aspects of the issue.

<sup>14</sup> Mixed questions of fact and law issues may implicate predominantly factual subordinate questions that are reviewed under the substantial evidence test even though the ultimate question may be reviewed by the independent judgment test. *Crocker National Bank v. City and County of San Francisco* (1989) 49 Cal.3d 881, 888-889.

SCAQMD submits that an EIR's sufficiency as an informational document is ultimately a legal question that courts should determine using their independent judgment. This Court's language in *Laurel Heights I* supports this position. As this Court explained: "The court does not pass upon the correctness of the EIR's environmental conclusions, but only upon its *sufficiency as an informative document*." (*Laurel Heights I, supra*, 47 Cal.3d at 392-393) (emphasis added.) As described above, the Court in *Vineyard Area Citizens v. City of Rancho Cordova, supra*, 40 Cal.4th at 431, also used its independent judgment to determine what level of analysis CEQA requires for water supply impacts. The Court did not defer to the lead agency's opinion regarding the law's requirements; rather, it determined for itself what level of analysis was necessary to meet "[t]he law's informational demands." (*Id.* at p. 432.) Further, existing case law also holds that where an agency fails to comply with CEQA's information disclosure requirements, the agency has "failed to proceed in the manner required by law." (*Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118.)

However, whether an EIR satisfies CEQA's requirements depends in part on whether it was reasonably feasible for an agency to conduct additional or more thorough analysis. EIRs must contain "a detailed statement" of a project's impacts (Pub. Res. Code § 21061), and an agency must "use its best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144.) Nevertheless, "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." (CEQA Guidelines § 15151.)

SCAQMD submits that the question of whether additional analysis or a particular study suggested by a commenter is "feasible" is generally a question of fact. Courts have already held that whether a particular alternative is "feasible" is reviewed by the substantial evidence test.

(*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 598-99; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 883.) Thus, if a lead agency determines that a particular study or analysis is infeasible, that decision should generally be judged by the substantial evidence standard. However, SCAQMD urges this Court to hold that lead agencies must explain the basis of any determination that a particular analysis is infeasible in the EIR itself. An EIR must discuss information, including issues related to the feasibility of particular analyses “in sufficient detail to enable meaningful participation and criticism by the public. ‘[W]hatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.’” (*Laurel Heights I, supra*, 47 Cal.3d at p. 405 (quoting *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 831) (discussing analysis of alternatives).) The evidence on which the determination is based should also be summarized in the EIR itself, with appropriate citations to reference materials if necessary. Otherwise commenting agencies such as SCAQMD would be forced to guess where the lead agency's evidence might be located, thus thwarting effective public participation.

Moreover, if a lead agency determines that a particular study or analysis would not result in reliable or useful information and for that reason is not feasible, that determination should be judged by the substantial evidence test. (See *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority, supra*, 57 Cal.4th 439, 448, 457:

whether “existing conditions” baseline would be misleading or uninformative judged by substantial evidence standard.<sup>15</sup>)

If the lead agency’s determination that a particular analysis or study is not feasible is supported by substantial evidence, then the agency has not violated CEQA’s information disclosure provisions, since it would be infeasible to provide additional information. This Court’s decisions provide precedent for such a result. For example, this Court determined that the issue of whether the EIR should have included a more detailed discussion of future herbicide use was resolved because substantial evidence supported the agency’s finding that “the precise parameters of future herbicide use could not be predicted.” *Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 955.

Of course, SCAQMD expects that courts will continue to hold lead agencies to their obligations to consult with, and not to ignore or misrepresent, the views of sister agencies having special expertise in the area of air quality. (*Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2007) 91 Cal.App.4<sup>th</sup> 1344, 1364 n.11.) In some cases, information provided by such expert agencies may establish that the purported evidence relied on by the lead agency is not in fact “substantial”. (*Id.* at pp. 1369-1371.)

In sum, courts retain ultimate responsibility to determine what CEQA requires. However, the law does not require exhaustive analysis, but only what is reasonably feasible. Agencies deserve deference for their factual determinations regarding what type of analysis is reasonably feasible. On the other hand, if a commenter requests more information, and the lead agency declines to provide it but does *not* determine that the

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<sup>15</sup> The substantial evidence standard recognizes that the courts "have neither the resources nor the scientific expertise" to weigh conflicting evidence on technical issues. (*Laurel Heights I, supra*, 47 Cal.3d 376, 393.)

requested study or analysis would be infeasible, misleading or uninformative, the question becomes whether the omission of that analysis renders the EIR inadequate to satisfy CEQA's informational purposes. (*Id.* at pp. 1370-71.) Again, this is predominantly a question of law and should be judged by the de novo or independent judgment standard of review. Of course, this Court has recognized that a "project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study...might be helpful does not make it necessary." (*Laurel Heights I, supra*, 47 Cal.3d 376, 415 – see also CEQA Guidelines § 15204(a) [CEQA "does not require a lead agency to conduct every test. . . recommended or demanded by commenters."].) Courts, then, must adjudicate whether an omission of particular information renders an EIR inadequate to serve CEQA's informational purposes.<sup>16</sup>

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<sup>16</sup> We recognize that there is case law stating that the substantial evidence standard applies to "challenges to the scope of an EIR's analysis of a topic" as well as the methodology used and the accuracy of the data relied on in the document "because these types of challenges involve factual questions." (*Bakersfield Citizens for Local Control v. City of Bakersfield, supra*, 124 Cal.App.4<sup>th</sup> 1184, 1198, and cases relied on therein.) However, we interpret this language to refer to situations where the question of the scope of the analysis really is factual—that is, where it involves whether further analysis is feasible, as discussed above. This interpretation is supported by the fact that the *Bakersfield* court expressly rejected an argument that a claimed "omission of information from the EIR should be treated as inquiries whether there is substantial evidence supporting the decision approving the project." *Bakersfield, supra*, 124 Cal.App.4<sup>th</sup> at p. 1208. And the *Bakersfield* court ultimately decided that the lead agency must analyze the connection between the identified air pollution impacts and resulting health impacts, even though the EIR already included some discussion of air-pollution-related respiratory illnesses. *Bakersfield, supra*, 124 Cal.App.4<sup>th</sup> at p. 1220. Therefore, the court must not have interpreted this question as one of the "scope of the analysis" to be judged by the substantial evidence standard.



**B. Friant Ranch's Rationale for Rejecting the Independent Judgment Standard of Review is Unsupported by Case Law.**

In its brief, Friant Ranch makes a distinction between cases where a required CEQA topic is not discussed at all (to be reviewed by independent judgment as a failure to proceed in the manner required by law) and cases where a topic is discussed, but the commenter claims the information provided is insufficient (to be judged by the substantial evidence test). (Opening Brief, pp. 13-17.) The Court of Appeal recognized these two types of cases, but concluded that both raised questions of law. (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) We believe the distinction drawn by Friant Ranch is unduly narrow, and inconsistent with cases which have concluded that CEQA documents are insufficient. In many instances, CEQA's requirements are stated broadly, and the courts must interpret the law to determine what level of analysis satisfies CEQA's mandate for providing meaningful information, even though the EIR discusses the issue to some extent.

For example, the CEQA Guidelines require discussion of the existing environmental baseline. In *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 954-955, the lead agency had discussed the environmental baseline by describing historic month-end water levels in the affected lakes. However, the court held that this was not an adequate baseline discussion because it failed to discuss the timing and amounts of past actual water releases, to allow comparison with the proposed project. The court evidently applied the independent judgment test to its decision, even though the agency discussed the issue to some extent.

Likewise, in *Vineyard Area Citizens* (2007) 40 Cal.4th 412, this Court addressed the question of whether an EIR's analysis of water supply impacts complied with CEQA. The parties agreed that the EIR was required to analyze the effects of providing water to the development project, "and that in order to do so the EIR had, in some manner, to identify the planned sources of that water." (*Vineyard Area Citizens, supra*, at p. 428.) However, the parties disagreed as to the level of detail required for this analysis and "what level of uncertainty regarding the availability of water supplies can be tolerated in an EIR . . . ." (*Id.*) In other words, the EIR had analyzed water supply impacts for the project, but the petitioner claimed that the analysis was insufficient.

This Court noted that neither CEQA's statutory language or the CEQA Guidelines specifically addressed the question of how precisely an EIR must discuss water supply impacts. (*Id.*) However, it explained that CEQA "states that '[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.'" (*Id.*, [Guidelines § 15144].) The Court used this general principle, along with prior precedent, to elucidate four "principles for analytical adequacy" that are necessary in order to satisfy "CEQA's informational purposes." (*Vineyard Area Citizens, supra*, at p. 430.) The Court did not defer to the agency's determination that the EIR's analysis of water supply impacts was sufficient. Rather, this Court used its independent judgment to determine for itself the level of analysis required to satisfy CEQA's fundamental purposes. (*Vineyard Area Citizens, supra*, at p. 441: an EIR does not serve its purposes where it neglects to explain likely sources of water and "... leaves long term water supply considerations to later stages of the project.")

Similarly, the CEQA Guidelines require an analysis of noise impacts of the project. (Appendix G, “Environmental Checklist Form.”<sup>17</sup>) In *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1123, the court held that the lead agency’s noise impact analysis was inadequate even though it had addressed the issue and concluded that the increase would not be noticeable. If the court had been using the substantial evidence standard, it likely would have upheld this discussion.

Therefore, we do not agree that the issue can be resolved on the basis suggested by Friant Ranch, which would apply the substantial evidence standard to *every* challenge to an analysis that addresses a required CEQA topic. This interpretation would subvert the courts’ proper role in interpreting CEQA and determining what the law requires.

Nor do we agree that the Court of Appeal in this case violated CEQA’s prohibition on courts interpreting its provisions “in a manner which imposes procedural or substantive requirements beyond those explicitly stated in this division or in the state guidelines.” (Pub. Resources Code § 21083.1.) CEQA requires an EIR to describe *all* significant impacts of the project on the environment. (Pub. Resources Code § 21100(b)(2); *Vineyard Area Citizens, supra*, at p. 428.) Human beings are part of the environment, so CEQA requires EIRs to discuss a project’s significant impacts on human health. However, except in certain particular circumstances,<sup>18</sup> neither the CEQA statute nor Guidelines specify the precise level of analysis that agencies must undertake to satisfy the law’s requirements. (see, e.g., CEQA Guidelines § 15126.2(a) [EIRs must describe “health and safety problems caused by {a project’s} physical changes”].) Accordingly, courts must interpret CEQA as a whole to

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<sup>17</sup> Association of Environmental Professionals, 2015 CEQA Statute and Guidelines (2015) p.287.

<sup>18</sup> E.g., Pub. Resources Code § 21151.8(C)(3)(B)(iii) (requiring specific type of health risk analysis for siting schools).

determine whether a particular EIR is sufficient as an informational document. A court determining whether an EIR's discussion of human health impacts is legally sufficient does not constitute imposing a new substantive requirement.<sup>19</sup> Under Friant Ranch's theory, the above-referenced cases holding a CEQA analysis inadequate would have violated the law. This is not a reasonable interpretation.

#### **IV. COURTS MUST SCRUPULOUSLY ENFORCE THE REQUIREMENTS THAT LEAD AGENCIES CONSULT WITH AND OBTAIN COMMENTS FROM AIR DISTRICTS**

Courts must "scrupulously enforce" CEQA's legislatively mandated requirements. (*Vineyard Area Citizens, supra*, 40 Cal.4<sup>th</sup> 412, 435.) Case law has firmly established that lead agencies must consult with the relevant air pollution control district before conducting an initial study, and must provide the districts with notice of the intention to adopt a negative declaration (or EIR). (*Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 958.) As *Schenck* held, neither publishing the notice nor providing it to the State Clearinghouse was a sufficient substitute for sending notice directly to the air district. (*Id.*) Rather, courts "must be satisfied that [administrative] agencies have fully complied with the procedural requirements of CEQA, since only in this way can the important public purposes of CEQA be protected from subversion." *Schenck*, 198 Cal.App.4th at p. 959 (citations omitted).<sup>20</sup>

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<sup>19</sup> We submit that Public Resources Code Section 21083.1 was intended to prevent courts from, for example, holding that an agency must analyze economic impacts of a project where there are no resulting environmental impacts (see CEQA Guidelines § 15131), or imposing new procedural requirements, such as imposing additional public notice requirements not set forth in CEQA or the Guidelines.

<sup>20</sup> Lead agencies must consult air districts, as public agencies with jurisdiction by law over resources affected by the project, *before* releasing an EIR. (Pub. Resources Code §§ 21104(a); 21153.) Moreover, air

Lead agencies should be aware, therefore, that failure to properly seek and consider input from the relevant air district constitutes legal error which may jeopardize their project approvals. For example, the court in *Fall River Wild Trout Foundation v. County of Shasta*, (1999) 70 Cal.App.4th 482, 492 held that the failure to give notice to a trustee agency (Department of Fish and Game) was prejudicial error requiring reversal. The court explained that the lack of notice prevented the Department from providing any response to the CEQA document. (*Id.* at p. 492.) It therefore prevented relevant information from being presented to the lead agency, which was prejudicial error because it precluded informed decision-making. (*Id.*)<sup>21</sup>

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districts should be considered “state agencies” for purposes of the requirement to consult with “trustee agencies” as set forth in Public Resources Code § 20180.3(a). This Court has long ago held that the districts are not mere “local agencies” whose regulations are superseded by those of a state agency regarding matters of statewide concern, but rather have concurrent jurisdiction over such issues. (*Orange County Air Pollution Control District v. Public Util. Com.* (1971) 4 Cal.3d 945, 951, 954.) Since air pollution is a matter of statewide concern, *Id.* at 952, air districts should be entitled to trustee agency status in order to ensure that this vital concern is adequately protected during the CEQA process.

<sup>21</sup> In *Schenck*, the court concluded that failure to give notice to the air district was not prejudicial, but this was partly because the trial court had already corrected the error before the case arrived at the Court of Appeal. The trial court issued a writ of mandate requiring the lead agency to give notice to the air district. The air district responded by concurring with the lead agency that air impacts were not significant. (*Schenck*, 198 Cal.App.4th 949, 960.) We disagree with the *Schenck* court that the failure to give notice to the air district would not have been prejudicial (even in the absence of the trial court writ) merely because the lead agency purported to follow the air district’s published CEQA guidelines for significance. (*Id.*, 198 Cal.App.4th at p. 960.) In the first place, absent notice to the air district, it is uncertain whether the lead agency properly followed those guidelines. Moreover, it is not realistic to expect that an air district’s published guidelines would necessarily fully address all possible air-quality related issues that can arise with a CEQA project, or that those

Similarly, lead agencies must obtain additional information requested by expert agencies, including those with jurisdiction by law, if that information is necessary to determine a project's impacts. (*Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236-37.) Approving a project without obtaining that information constitutes a failure to proceed in the manner prescribed by CEQA. (*Id.* at p. 1236.)

Moreover, a lead agency can save significant time and money by consulting with the air district early in the process. For example, the lead agency can learn what the air district recommends as an appropriate analysis on the facts of its case, including what kinds of health impacts analysis may be available, and what models are appropriate for use. This saves the lead agency from the need to do its analysis all over again and possibly needing to recirculate the document after errors are corrected, if new significant impacts are identified. (CEQA Guidelines § 15088.5(a).) At the same time, the air district's expert input can help the lead agency properly determine whether another commenter's request for additional analysis or studies is reasonable or feasible. Finally, the air district can provide input on what mitigation measures would be feasible and effective.

Therefore, we suggest that this Court provide guidance to lead agencies reminding them of the importance of consulting with the relevant air districts regarding these issues. Otherwise, their feasibility decisions may be vulnerable to air district evidence that establishes that there is no substantial evidence to support the lead agency decision not to provide specific analysis. (*See Berkeley Keep Jets Over the Bay, supra*, 91 Cal.App.4th 1344, 1369-1371.)

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guidelines would necessarily be continually modified to reflect new developments. Therefore we believe that, had the trial court not already ordered the lead agency to obtain the air district's views, the failure to give notice would have been prejudicial, as in *Fall River, supra*, 70 Cal.App.4th 482, 492.

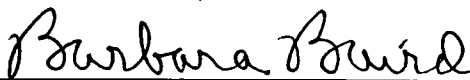
## CONCLUSION

The SCAQMD respectfully requests this Court *not* to establish a hard-and-fast rule concerning whether CEQA requires a lead agency to correlate identified air quality impacts of a project with resulting health outcomes. Moreover, the question of whether an EIR is “sufficient as an informational document” is a mixed question of fact and law containing two levels of inquiry. Whether a particular proposed analysis is feasible is predominantly a question of fact to be judged by the substantial evidence standard of review. Where the requested analysis is feasible, but the lead agency relies on legal or policy reasons not to provide it, the question of whether the EIR is nevertheless sufficient as an informational document is predominantly a question of law to be judged by the independent judgment standard of review.

DATED: April 3, 2015

Respectfully submitted,

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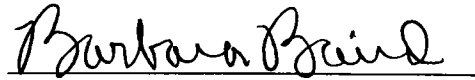
*SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT*

## **CERTIFICATE OF WORD COUNT**

Pursuant to Rule 8.520(c)(1) of the California Rules of Court, I hereby certify that this brief contains 8,476 words, including footnotes, but excluding the Application, Table of Contents, Table of Authorities, Certificate of Service, this Certificate of Word Count, and signature blocks. I have relied on the word count of the Microsoft Word Vista program used to prepare this Certificate.

DATED: April 3, 2015

Respectfully submitted,

  
Barbara Baird



## **PROOF OF SERVICE**

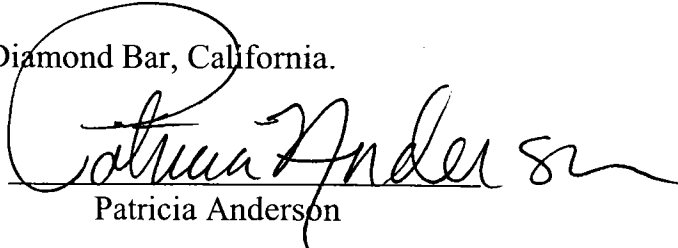
I am employed in the County of Los Angeles, California. I am over the age of 18 years and not a party to the within action. My business address is 21865 Copley Drive, Diamond Bar, California 91765.

On April 3, 2015 I served true copies of the following document(s) described as **APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND [PROPOSED] BRIEF OF *AMICUS CURIAE*** by placing a true copy of the foregoing document(s) in a sealed envelope addressed as set forth on the attached service list as follows:

**BY MAIL:** I enclosed the document(s) in a sealed envelope or package addressed to the persons at the addresses listed in the Service List and placed the envelope for collection and mailing following our ordinary business practices. I am readily familiar with this District's practice for collection and processing of correspondence for mailing. Under that practice, the correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid at Diamond Bar, California, in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 3, 2015 at Diamond Bar, California.

  
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SUPREME COURT COPY

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

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SIERRA CLUB, REVIVE THE SAN JOAQUIN, and  
LEAGUE OF WOMEN VOTERS OF FRESNO,  
*Plaintiffs and Appellants*

v.

COUNTY OF FRESNO,  
*Defendant and Respondent*

FRIANT RANCH, L.P.,  
*Real Party in Interest and Respondent*

SUPREME COURT  
FILED

APR 13 2015

Frank A. McGuire Clerk  
Deputy

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After a Decision by the Court of Appeal, filed May 27, 2014  
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno  
Case No. 11CECG00726

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**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF  
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN  
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND  
REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

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CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

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## **APPLICATION**

Pursuant to California Rules of Court 8.520(f)(1), proposed Amicus Curiae San Joaquin Valley Unified Air Pollution Control District hereby requests permission from the Chief Justice to file an amicus brief in support of Defendant and Respondent, County of Fresno, and Defendant and Real Parties in Interest Friant Ranch, L.P. Pursuant to Rule 8.520(f)(5) of the California Rules of Court, the proposed amicus curiae brief is combined with this Application. The brief addresses the following issue certified by this Court for review:

Is an EIR adequate when it identifies the health impacts of air pollution and quantifies a project's expected emissions, or does CEQA further require the EIR to *correlate* a project's air quality emissions to specific health impacts?

As of the date of this filing, the deadline for the final reply brief on the merits was March 5, 2015. Accordingly, under Rule 8.520(f)(2), this application and brief are timely.

### **1. Background and Interest of San Joaquin Valley Unified Air Pollution Control District**

The San Joaquin Valley Unified Air Pollution Control District ("Air District") regulates air quality in the eight counties comprising the San Joaquin Valley ("Central Valley"): Kern, Tulare, Madera, Fresno, Merced, San Joaquin, Stanislaus, and Kings, and is primarily responsible for attaining air quality standards within its jurisdiction. After billions of dollars of investment by Central Valley businesses, pioneering air quality regulations, and consistent efforts by residents, the Central Valley air basin has made historic improvements in air quality.

The Central Valley's geographical, topographical and meteorological features create exceptionally challenging air quality

conditions. For example, it receives air pollution transported from the San Francisco Bay Area and northern Central Valley communities, and the southern portion of the Central Valley includes three mountain ranges (Sierra, Tehachapi, and Coastal) that, under some meteorological conditions, effectively trap air pollution. Central Valley air pollution is only a fraction of what the Bay Area and Los Angeles produce, but these natural conditions result in air quality conditions that are only marginally better than Los Angeles, even though about ten times more pollution is emitted in the Los Angeles region. Bay Area air quality is much better than the Central Valley's, even though the Bay Area produces about six times more pollution. The Central Valley also receives air pollution transported from the Bay Area and northern counties in the Central Valley, including Sacramento, and transboundary anthropogenic ozone from as far away as China.

Notwithstanding these challenges, the Central Valley has reduced emissions at the same or better rate than other areas in California and has achieved unparalleled milestones in protecting public health and the environment:

- In the last decade, the Central Valley became the first air basin classified by the federal government under the Clean Air Act as a “serious nonattainment” area to come into attainment of health-based National Ambient Air Quality Standard (“NAAQS”) for coarse particulate matter (PM<sub>10</sub>), an achievement made even more notable given the Valley's extensive agricultural sector. Unhealthy levels of particulate matter can cause and exacerbate a range of chronic and acute illnesses.
- In 2013, the Central Valley became the first air basin in the country to improve from a federal designation of “extreme” nonattainment to

actually attain (and quality for an attainment designation) of the 1-hour ozone NAAQS; ozone creates “smog” and, like PM10, causes adverse health impacts.

- The Central Valley also is in full attainment of federal standards for lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide.
- The Central Valley continues to make progress toward compliance with its last two attainment standards, with the number of exceedences for the 8-hour ozone NAAQS reduced by 74% (for the 1997 standard) and 38% (for the 2008 standard) since 1991, and for the small particulate matter (PM2.5) NAAQS reduced by 85% (for the 1997 standard) and 61% (for the 2006 standard).

Sustained improvement in Central Valley air quality requires a rigorous and comprehensive regulatory framework that includes prohibitions (e.g., on wood-burning fireplaces in new residences), mandates (e.g., requiring the installation of best available pollution reduction technologies on new and modified equipment and industrial operations), innovations (e.g., fees assessed against residential development to fund pollution reduction actions to “offset” vehicular emissions associated with new residences), incentive programs (e.g., funding replacements of older, more polluting heavy duty trucks and school buses)<sup>1</sup>, ongoing planning for continued air quality improvements, and enforcement of Air District permits and regulations.

The Air District is also an expert air quality agency for the eight counties and cities in the San Joaquin Valley. In that capacity, the Air District has developed air quality emission guidelines for use by the Central

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<sup>1</sup> San Joaquin’s incentive program has been so successful that through 2012, it has awarded over \$ 432 million in incentive funds and has achieved 93,349 tons of lifetime emissions reductions. See SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 2012 PM2.5 PLAN, 6-6 (2012) available at <http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/06%20Chapter%206%20Incentives.pdf>.

Valley counties and cities that implement the California Environment Quality Act (CEQA).<sup>2</sup> In its guidance, the Air District has distinguished between toxic air contaminants and criteria air pollutants.<sup>3</sup> Recognizing this distinction, the Air District's CEQA Guidance has adopted distinct thresholds of significance for *criteria* pollutants (i.e., ozone, PM2.5 and their respective precursor pollutants) based upon scientific and factual data which demonstrates the level that can be accommodated on a cumulative basis in the San Joaquin Valley without affecting the attainment of the applicable NAAQS.<sup>4</sup> For *toxic air* pollutants, the District has adopted different thresholds of significance which scientific and factual data demonstrates has the potential to expose sensitive receptors (i.e., children, the elderly) to levels which may result in localized health impacts.<sup>5</sup>

The Air District's CEQA Guidance was followed by the County of Fresno in its environment review of the Friant Ranch project, for which the Air District also served as a commenting agency. The Court of Appeal's holding, however, requiring correlation between the project's criteria

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<sup>2</sup> See, e.g., SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, PLANNING DIVISION, GUIDE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACTS (2015), available at [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf) ("CEQA Guidance").

<sup>3</sup> Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health, they are distinguishable from toxic air contaminants and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of toxic air contaminants occurs solely under section 112 of the Act. Compare 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 with 42 U.S.C. § 7411.

<sup>4</sup> See, e.g., CEQA Guidance at [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf), pp. 64-66, 80.

<sup>5</sup> See, e.g., CEQA Guidance at [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf), pp. 66, 99-101.



pollutants and local health impacts, departs from the Air District's Guidance and approved methodology for assessing criteria pollutants. A close reading of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants (for which a local health risk assessment is feasible and routinely performed) and criteria air pollutants (for which a local health risk assessment is not feasible and would result in speculative results).<sup>6</sup> The Air District has a direct interest in ensuring the lawfulness and consistent application of its CEQA Guidance, and will explain how the Court of Appeal departed from the Air District's long-standing CEQA Guidance in addressing criteria pollutants and toxic air contaminants in this amicus brief.

## **2. How the Proposed Amicus Curiae Brief Will Assist the Court**

As counsel for the proposed amicus curiae, we have reviewed the briefs filed in this action. In addition to serving as a "commentary agency" for CEQA purposes over the Friant Ranch project, the Air District has a strong interest in assuring that CEQA is used for its intended purpose, and believes that this Court would benefit from additional briefing explaining the distinction between criteria pollutants and toxic air contaminants and the different methodologies employed by local air pollution control agencies such as the Air District to analyze these two categories of air pollutants under CEQA. The Air District will also explain how the Court of Appeal's opinion is based upon a fundamental misunderstanding of these two different approaches by requiring the County of Fresno to correlate the project's *criteria* pollution emissions with *local* health impacts. In doing

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<sup>6</sup> CEQA does not require speculation. *See, e.g., Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.*, 6 Cal. 4th 1112, 1137 (1993) (upholding EIR that failed to evaluate cumulative toxic air emission increases given absence of any acceptable means for doing so).

so, the Air District will provide helpful analysis to support its position that at least insofar as criteria pollutants are concerned, CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.

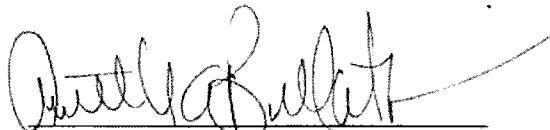
#### **Rule 8.520 Disclosure**

Pursuant to Cal. R. 8.520(f)(4), neither the Plaintiffs nor the Defendant or Real Party In Interest or their respective counsel authored this brief in whole or in part. Neither the Plaintiffs nor the Defendant or Real Party in Interest or their respective counsel made any monetary contribution towards or in support of the preparation of this brief.

#### **CONCLUSION**

On behalf of the San Joaquin Valley Unified Air Pollution Control District, we respectfully request that this Court accept the filing of the attached brief.

Dated: April 2, 2015



Annette A. Ballatore-Williamson  
District Counsel  
Attorney for Proposed Amicus Curiae

SAN JOAQUIN VALLEY UNIFIED  
AIR POLLUTION CONTROL  
DISTRICT

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

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SIERRA CLUB, REVIVE THE SAN JOAQUIN, and  
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*Real Party in Interest and Respondent*

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**AMICUS CURIAE BRIEF OF  
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SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND  
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*San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan*, Appendix B pp. B-6, B-9, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/docs/AQ\\_Ozone\\_2007\\_Adopted/19%20Appendix%20B%20April%202007.pdf](http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf) (visited March 12, 2015).....9

## **I. INTRODUCTION.**

The San Joaquin Valley Unified Air Pollution Control District (“Air District”) respectfully submits that the Court of Appeal erred when it held that the air quality analysis contained in the Environmental Impact Report (“EIR”) for the Friant Ranch development project was inadequate under the California Environmental Quality Act (“CEQA”) because it did not include an analysis of the correlation between the project’s criteria air pollutants and the potential adverse human health impacts. A close reading of the portion of the administrative record that gave rise to this issue demonstrates that the Court’s holding is based on a misunderstanding of the distinction between toxic air contaminants and criteria air pollutants.

Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants (hereinafter referred to as “TACs”) regulated by the United States Environmental Protection Agency (“EPA”) and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health,



they are distinguishable from TACs and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of TACs occurs solely under section 112 of the Act. *Compare* 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 *with* 42 U.S.C. § 7411.

The most relevant difference between criteria pollutants and TACs for purposes of this case is the manner in which human health impacts are accounted for. While it is common practice to analyze the correlation between an individual facility's TAC emissions and the expected localized human health impacts, such is not the case for criteria pollutants. Instead, the human health impacts associated with criteria air pollutants are analyzed and taken into consideration when EPA sets the national ambient air quality standard ("NAAQS") for each criteria pollutant. 42 U.S.C. § 7409(b)(1). The health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the NAAQS. Accordingly, while the type of individual facility / health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.

It is clear from a reading of both the administrative record and the Court of Appeal's decision that the Court did not have the expertise to fully

appreciate the difference between TACs and criteria air pollutants. As a result, the Court has ordered the County of Fresno to conduct an analysis that is not practicable and not likely yield valid information. The Air District respectfully requests that this portion of the Court of Appeal's decision be reversed.

**II. THE COURT OF APPEAL ERRED IN FINDING THE FRIANT RANCH EIR INADEQUATE FOR FAILING TO ANALYZE THE SPECIFIC HUMAN HEALTH IMPACTS ASSOCIATED CRITERIA AIR POLLUTANTS.**

Although the Air District does not take lightly the amount of air emissions at issue in this case, it submits that the Court of Appeal got it wrong when it required Fresno County to revise the Friant Ranch EIR to include an analysis correlating the criteria air pollutant emissions associated with the project with specific, localized health-impacts. The type of analysis the Court of Appeal has required will not yield reliable information because currently available modeling tools are not well suited for this task. Further, in reviewing this issue de novo, the Court of Appeal failed to appreciate that it lacked the scientific expertise to appreciate the significant differences between a health risk assessment commonly performed for toxic air contaminants and a similar type of analysis it felt should have been conducted for criteria air pollutants.

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**A. Currently Available Modeling Tools are not Equipped to Provide a Meaningful Analysis of the Correlation between an Individual Development Project's Air Emissions and Specific Human Health Impacts.**

In order to appreciate the problematic nature of the Court of Appeals' decision requiring a health risk type analysis for criteria air pollutants, it is important to understand how the relevant criteria pollutants (ozone and particulate matter) are formed, dispersed and regulated.

Ground level ozone (smog) is not directly emitted into the air, but is formed when precursor pollutants such as oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOCs) are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight.<sup>1</sup> Once formed, ozone can be transported long distances by wind.<sup>2</sup> Because of the complexity of ozone formation, a specific tonnage amount of NO<sub>x</sub> or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area. In fact, even rural areas that have relatively low tonnages of emissions of NO<sub>x</sub> or VOCs can have high levels of ozone concentration simply due to wind transport.<sup>3</sup> Conversely, the San Francisco Bay Area has six times more NO<sub>x</sub> and VOC emissions per square mile than the San Joaquin Valley, but experiences lower

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<sup>1</sup> See United States Environmental Protection Agency, *Ground-level Ozone: Basic Information*, available at: <http://www.epa.gov/airquality/ozonepollution/basic.html> (visited March 10, 2015).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

concentrations of ozone (and better air quality) simply because sea breezes disperse the emissions.<sup>4</sup>

Particulate matter (“PM”) can be divided into two categories: directly emitted PM and secondary PM.<sup>5</sup> While directly emitted PM can have a localized impact, the tonnage emitted does not always equate to the local PM concentration because it can be transported long distances by wind.<sup>6</sup> Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SO<sub>x</sub>) and NO<sub>x</sub>.<sup>7</sup> Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.

The disconnect between the *tonnage* of precursor pollutants (NO<sub>x</sub>, SO<sub>x</sub> and VOCs) and the *concentration* of ozone or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or PM. Indeed, the national ambient air quality standards (“NAAQS”), which are statutorily required to be set by the United States Environmental Protection

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<sup>4</sup> *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan*, Executive Summary p. ES-6, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/docs/AQ\\_Ozone\\_2007\\_Adopted/03%20Executive%20Summary.pdf](http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/03%20Executive%20Summary.pdf) (visited March 10, 2015).

<sup>5</sup> United States Environmental Protection Agency, *Particulate Matter: Basic Information*, available at: <http://www.epa.gov/airquality/particlepollution/basic.html> (visited March 10, 2015).

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

Agency (“EPA”) at levels that are “requisite to protect the public health,” 42 U.S.C. § 7409(b)(1), are established as concentrations of ozone or particulate matter and not as tonnages of their precursor pollutants.<sup>8</sup>

Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period.<sup>9</sup> Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District’s tools and plans for attaining the NAAQS are regional in nature.

For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NO<sub>x</sub>, SO<sub>x</sub> and VOCs) and the atmospheric chemistry and meteorology of the Valley.<sup>10</sup> At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor

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<sup>8</sup> See, e.g., United States Environmental Protection Agency, *Table of National Ambient Air Quality Standards*, available at: <http://www.epa.gov/air/criteria.html#3> (visited March 10, 2015).

<sup>9</sup> *San Joaquin Valley Unified Air Pollution Control District 2013 Plan for the Revoked 1-Hour Ozone Standard*, Ch. 2 p. 2-16, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf](http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf) (visited March 10, 2015).

<sup>10</sup> *Id.* at Ch. 2 p. 2-19 (visited March 12, 2015); *San Joaquin Valley Unified Air Pollution Control District 2008 PM<sub>2.5</sub> Plan*, Appendix F, pp. F-2 – F-5, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/docs/AQ\\_Final\\_Adopted\\_PM2.5/20%20Appendix%20F.pdf](http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Final_Adopted_PM2.5/20%20Appendix%20F.pdf) (visited March 19, 2015).

emissions Valley wide.<sup>11</sup> Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which *all* of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.<sup>12</sup>

Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the Valley can accommodate without affecting the attainment date for the NAAQS.<sup>13</sup> The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources permitted by the Air District must "offset" their emissions.<sup>14</sup> This "offset"

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<sup>11</sup> *Id.*

<sup>12</sup> Although the Air District does have a dispersion modeling tool used during its air permitting process that is used to predict whether a particular project's directly emitted PM will either cause an exceedance of the PM NAAQS or contribute to an existing exceedance, this model bases the prediction on a worst case scenario of emissions and meteorology and has no provision for predicting any associated human health impacts. Further, this analysis is only performed for stationary sources (factories, oil refineries, etc.) that are required to obtain a New Source Review permit from the Air District and not for development projects such as Friant Ranch over which the Air District has no preconstruction permitting authority. See San Joaquin Valley Unified Air Pollution Control District Rule 2201 §§ 2.0; 3.3.9; 4.14.1, available at: <http://www.valleyair.org/rules/curnrules/Rule22010411.pdf> (visited March 19, 2015).

<sup>13</sup> *San Joaquin Valley Unified Air Pollution Control District Guide to Assessing and Mitigating Air Quality Impacts*, (March 19, 2015) p. 22, available at: <http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf> (visited March 30, 2015).

<sup>14</sup> *Id.* at pp. 22, 25.

level allows for growth while keeping the cumulative effects of all new sources at a level that will not impede attainment of the NAAQS.<sup>15</sup> In the Valley, these thresholds are 15 tons per year of PM, and 10 tons of NOx or VOC per year. *Sierra Club, supra*, 172 Cal.Rptr.3d at 303; AR 4554. Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, “cumulative impacts.”

Accordingly, the significance thresholds applied in the Friant Ranch EIR (15 tons per year of PM and 10 tons of NOx or VOCs) are not intended to be indicative of any localized human health impact that the project may have. While the health effects of air pollution are of primary concern to the Air District (indeed, the NAAQS are established to protect human health), the Air District is simply not equipped to analyze whether and to what extent the criteria pollutant emissions of an individual CEQA project directly impact human health in a particular area. This is true even for projects with relatively high levels of emissions of criteria pollutant precursor emissions.

For instance, according to the EIR, the Friant Ranch project is estimated to emit 109.52 tons per year of ROG (VOC), 102.19 tons per year of NOx, and 117.38 tons per year of PM. Although these levels well

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<sup>15</sup> <sup>15</sup> *San Joaquin Valley Unified Air Pollution Control District Environmental Review Guidelines* (Aug. 2000) p. 4-11, available at: [http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20\\_August%202000\\_.pdf](http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20_August%202000_.pdf) (visited March 12, 2015).

exceed the Air District's CEQA significance thresholds, this does not mean that one can easily determine the concentration of ozone or PM that will be created at or near the Friant Ranch site on a particular day or month of the year, or what specific health impacts will occur. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single "point source," but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site.

In addition, it would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have. As discussed above, the currently available modeling tools are equipped to model the impact of *all* emission sources in the Valley on attainment. According to the most recent EPA-approved emission inventory, the NO<sub>x</sub> inventory for the Valley is for the year 2014 is 458.2 tons per day, or 167,243 tons per year and the VOC (or ROG) inventory is 361.7 tons per day, or 132,020.5 tons per year.<sup>16</sup> Running the photochemical grid model used for predicting ozone attainment with the

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<sup>16</sup> *San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan*, Appendix B pp. B-6, B-9, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/docs/AQ\\_Ozone\\_2007\\_Adopted/19%20Appendix%20B%20April%202007.pdf](http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf) (visited March 12, 2015).



emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information given the relative scale involved.

Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.

For these reasons, it is not the norm for CEQA practitioners, including the Air District, to conduct an analysis of the localized health impacts associated with a project's criteria air pollutant emissions as part of the EIR process. When the accepted scientific method precludes a certain type of analysis, "the court cannot impose a legal standard to the contrary." *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 717 n. 8. However, that is exactly what the Court of Appeal has done in this case. Its decision upends the way CEQA air quality analysis of criteria pollutants occurs and should be reversed.

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**B. The Court of Appeal Improperly Extrapolated a Request for a Health Risk Assessment for Toxic Air Contaminants into a Requirement that the EIR contain an Analysis of Localized Health Impacts Associated with Criteria Air Pollutants.**

The Court of Appeal's error in requiring the new health impact analysis for criteria air pollutants clearly stems from a misunderstanding of terms of art commonly used in the air pollution field. More specifically, the Court of Appeal (and Appellants Sierra Club et al.) appear to have confused the health risk analysis ("HRA") performed to determine the health impacts associated with a project's toxic air contaminants ("TACs"), with an analysis correlating a project's criteria air pollutants (ozone, PM and the like) with specific localized health impacts.

The first type of analysis, the HRA, is commonly performed during the Air District's stationary source permitting process for projects that emit TACs and is, thus, incorporated into the CEQA review process. An HRA is a comprehensive analysis to evaluate and predict the dispersion of TACs emitted by a project and the potential for exposure of human populations. It also assesses and quantifies both the individual and population-wide health risks associated with those levels of exposure. There is no similar analysis conducted for criteria air pollutants. Thus, the second type of analysis (required by the Court of Appeal), is not currently part of the Air District's process because, as outlined above, the health risks associated

with exposure to criteria pollutants are evaluated on a regional level based on the region's attainment of the NAAQS.

The root of this confusion between the types of analyses conducted for TACs versus criteria air pollutants appears to stem from a comment that was presented to Fresno County by the City of Fresno during the administrative process.

In its comments on the draft EIR, the City of Fresno (the only party to raise this issue) stated:

[t]he EIR must disclose the human health related effects of the Project's air pollution impacts. (CEQA Guidelines section 15126.2(a).) The EIR fails completely in this area. The EIR should be revised to disclose and determine the significance of TAC impacts, and of human health risks due to exposure to Project-related air emissions.

(AR 4602.)

In determining that the issue regarding the correlation between the Friant Ranch project's criteria air pollutants and adverse health impacts was adequately exhausted at the administrative level, the Court of Appeal improperly read the first two sentences of the City of Fresno's comment in isolation rather than in the context of the entire comment. *See Sierra Club v. County of Fresno* (2014) 172 Cal.Rptr.3d 271, 306. Although the comment first speaks generally in terms of "human health related effects" and "air pollution," it requests only that the EIR be revised to disclose "the significance of TACs" and the "human health risks due to exposure."

The language of this request in the third sentence of the comment is significant because, to an air pollution practitioner, the language would only have indicated only that a HRA for TACs was requested, and not a separate analysis of the health impacts associated with the project's criteria air pollutants. Fresno County clearly read the comment as a request to perform an HRA for TACs and limited its response accordingly. (AR 4602.)<sup>17</sup> The Air District submits that it would have read the City's comment in the same manner as the County because the City's use of the terms "human health risks" and "TACs" signal that an HRA for TACs is being requested. Indeed, the Air District was also concerned that an HRA be conducted, but understood that it was not possible to conduct such an analysis until the project entered the phase where detailed site specific information, such as the types of emission sources and the proximity of the sources to sensitive receptors became available. (AR 4553.)<sup>18</sup> The City of Fresno was apparently satisfied with the County's discussion of human health risks, as it did not raise the issue again when it commented on the final EIR. (AR 8944 – 8960.)

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<sup>17</sup> Appellants do not challenge the manner in which the County addressed TACs in the EIR. (Appellants' Answer Brief p. 28 fn. 7.)

<sup>18</sup> Appellants rely on the testimony of Air District employee, Dan Barber, as support for their position that the County should have conducted an analysis correlating the project's criteria air pollutant emissions with localized health impacts. (Appellants Answer Brief pp. 10-11; 28.) However, Mr. Barber's testimony simply reinforces the Air District's concern that a risk assessment (HRA) be conducted once the actual details of the project become available. (AR 8863.) As to criteria air pollutants, Mr. Barber's comments are aimed at the Air District's concern about the amount of emissions and the fact that the emissions will make it "more difficult for Fresno County and the Valley to reach attainment which means that the health of Valley residents maybe [sic] adversely impacted." Mr. Barber says nothing about conducting a separate analysis of the localized health impacts the project's emissions may have.

The Court of Appeal's holding, which incorrectly extrapolates a request for an HRA for TACs into a new analysis of the localized health impacts of the project's criteria air pollutants, highlights two additional errors in the Court's decision.

First, the Court of Appeal's holding illustrates why the Court should have applied the deferential substantial evidence standard of review to the issue of whether the EIR's air quality analysis was sufficient. The regulation of air pollution is a technical and complex field and the Court of Appeal lacked the expertise to fully appreciate the difference between TACs and criteria air pollutants and tools available for analyzing each type of pollutant.

Second, it illustrates that the Court likely got it wrong when it held that the issue regarding the criteria pollutant / localized health impact analysis was properly exhausted during the administrative process. In order to preserve an issue for the court, '[t]he "exact issue" must have been presented to the administrative agency....' [Citation.] *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, (2011) 196 Cal.App.4th 515, 527 129 Cal.Rptr.3d 512, 521; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 535, 78 Cal.Rptr.3d 1, 13. "[T]he objections must be sufficiently specific so that the agency has the

opportunity to evaluate and respond to them.’ [Citation.]” *Sierra Club v. City of Orange*, 163 Cal.App.4<sup>th</sup> at 536.<sup>19</sup>

As discussed above, the City’s comment, while specific enough to request a commonly performed HRA for TACs, provided the County with no notice that it should perform a new type of analysis correlating criteria pollutant tonnages to specific human health effects. Although the parties have not directly addressed the issue of failure to exhaust administrative remedies in their briefs, the Air District submits that the Court should consider how it affects the issues briefed by the parties since “[e]xhaustion of administrative remedies is a jurisdictional prerequisite to maintenance of a CEQA action.” *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4<sup>th</sup> 1184, 1199, 22 Cal.Rptr.3d 203.

### III. CONCLUSION

For all of the foregoing reasons, the Air District respectfully requests that the portion of the Court of Appeal’s decision requiring an analysis correlating the localized human health impacts associated with an individual project’s criteria air pollutant emissions be reversed.

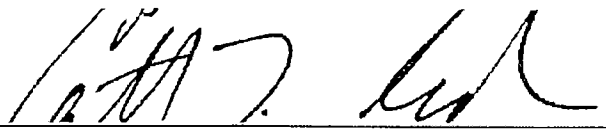
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<sup>19</sup> *Sierra Club v. City of Orange*, is illustrative here. In that case, the plaintiffs challenged an EIR approved for a large planned community on the basis that the EIR improperly broke up the various environmental impacts by separate project components or “piecemealed” the analysis in violation of CEQA. In evaluating the defense that the plaintiffs had failed to adequately raise the issue at the administrative level, the Court held that comments such as “the use of a single document for both a project-level and a program-level EIR [is] ‘confusing’,” and “[t]he lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project,” were too vague to fairly raise the argument of piecemealing before the agency. *Sierra Club v. City of Orange*, 163 Cal.App.4<sup>th</sup> at 537.

correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

Respectfully submitted,

Dated: April 2, 2015

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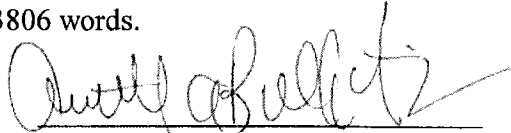
Catherine T. Redmond  
Attorney for Proposed Amicus  
Curiae

SAN JOAQUIN VALLEY  
UNIFIED  
AIR POLLUTION CONTROL  
DISTRICT

## **CERTIFICATE OF WORD COUNT**

Pursuant to Rule 8.204 of the California Rules of Court, I hereby certify that this document, based on the Word County feature of the Microsoft Word software program used to compose and print this document, contains, exclusive of caption, tables, certificate of word count, signature block and certificate of service, 3806 words.

Dated: April 2, 2015

A handwritten signature in cursive script, appearing to read "Annette A. Ballatore-Williamson", written over a horizontal line.

Annette A. Ballatore-Williamson  
District Counsel (SBN 192176)



*Sierra Club et al, v. County of Fresno, et al*  
**Supreme Court of California Case No.: S219783**  
Fifth District Court of Appeal Case No.: F066798  
Fresno County Superior Court Case No.: 11CECG00726

**PROOF OF SERVICE**

I am over the age of 18 years and not a party to the above-captioned action; that my business address is San Joaquin Valley Unified Air Pollution Control District located at 1990 E. Gettysburg Avenue, Fresno, California 93726.

On April 2, 2015, I served the document described below:

**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF  
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN  
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO**

On all parties to this action at the following addresses and in the following manner:

**PLEASE SEE ATTACHED SERVICE LIST**

- (XX) **(BY MAIL)** I caused a true copy of each document(s) to be laced in a sealed envelope with first-class postage affixed and placed the envelope for collection. Mail is collected daily at my office and placed in a United State Postal Service collection box for pick-up and delivery that same day.
- ( ) **(BY ELECTRONIC MAIL)** I caused a true and correct scanned image (.PDF file) copy to be transmitted via electronic mail transfer system in place at the San Joaquin Valley Unified Air Pollution Control District ("District"), originating from the undersigned at 1990 E. Gettysburg Avenue, Fresno, CA, to the address(es) indicated below.
- ( ) **(BY OVERNIGHT MAIL)** I caused a true and correct copy to be delivered via Federal Express to the following person(s) or their representative at the address(es) listed below.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I executed this document on April 2, 2015, at Fresno, California.

  
\_\_\_\_\_  
Esthela Soto

**SERVICE LIST**

***Sierra Club et al, v. County of Fresno, et al***

**Supreme Court of California Case No.: S219783**

**Fifth District Court of Appeal Case No.: F066798**

**Fresno County Superior Court Case No.: 11CECG00726**

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## APPENDIX C: NOISE DATA



Traffic Noise Calculator: FHWA 77-108																								
City of San Carlos General Plan Update EIR (COSC-11.0) Existing 2023 Traffic Noise																								
	Output					Inputs															Auto Inputs			
	dBA at 50 feet			Distance to CNEL Contour																				
ID	L <sub>eq,24hr</sub>	L <sub>dn</sub>	CNEL	70 dBA	65 dBA																60 dBA	Roadway		
1	65.4	69.1	69	44	140	442	El Camino Real		the North	Holly St	18,510	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
2	65.5	69.2	70	45	144	454	El Camino Real		Holly St	San Carlos Ave	19,025	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
3	65.7	69.4	70	48	152	480	El Camino Real	San Carlos Ave		Brittitan Ave	19,815	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	5	Hard	50	0	56
4	65.4	69.1	69	44	139	440	El Camino Real		Brittitan Ave	Howard Ave	18,170	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	5	Hard	50	0	56
5	65.4	69.1	70	45	142	448	El Camino Real		Howard Ave	the South	18,465	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	5	Hard	50	0	56
6	61.7	65.4	66	19	59	188	Old Country Road		the North	Holly St	11,095	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
7	59.0	62.7	63	10	32	102	Old Country Road		Holly St	Brittitan Ave	6,045	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
8	62.8	66.5	67	25	78	245	Old Country Road		Brittitan Ave	Howard Ave	10,480	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
9	60.9	64.6	65	16	50	158	Old Country Road		Howard Ave	the South	6,745	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
10	62.9	66.6	67	25	79	251	Industrial Road		the North	Holly St	10,500	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
11	62.5	66.2	67	23	73	229	Industrial Road		Holly St	Brittitan Ave	9,615	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
12	63.0	66.8	67	26	82	259	Industrial Road		Brittitan Ave	the South	10,855	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
13	58.1	61.8	62	8	26	83	Club Drive	San Carlos Ave		the South	10,530	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
14	59.5	63.2	64	11	36	115	Alameda de Las Pulgas	San Carlos Ave		Brittitan Ave	9,465	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
15	59.8	63.5	64	12	38	121	Alameda de Las Pulgas		Brittitan Ave	the South	9,980	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
16	60.3	64.1	64	14	44	139	Holly Street		the West	El Camino Real	17,705	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
17	56.5	60.2	61	6	18	57	Holly Street		El Camino Real	Old Country Rd	7,170	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
18	62.1	65.8	66	21	66	209	Holly Street		Old Country Rd	Industrial Rd	17,310	25	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
19	55.2	59.0	59	4	14	43	San Carlos Avenue		Club Dr	Alameda de Las Pulgas	3,535	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
20	59.5	63.2	64	11	36	113	San Carlos Avenue		Alameda de Las Pulgas	El Camino Real	14,130	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
21	59.0	62.7	63	10	32	101	Brittitan Avenue		the West	Alameda de Las Pulgas	8,310	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
22	58.3	62.0	62	9	28	87	Brittitan Avenue		Alameda de Las Pulgas	El Camino Real	7,165	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
23	59.2	62.9	63	11	34	107	Brittitan Avenue		Old Country Rd	Industrial Rd	6,205	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
24	58.6	62.3	63	9	29	92	Howard Avenue		the West	El Camino Real	9,350	25	0.0%	97.5%	1.5%	1.0%	75.0%	10.0%	15.0%	2	Hard	50	0	20
25	58.2	61.9	62	8	27	84	Howard Avenue		Old Country Rd	the East	4,870	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44

Traffic Noise Calculator: FHWA 77-108		City of San Carlos General Plan Update EIR (COSC-11.0) 2045 No Project Traffic Noise																								
		Output						Inputs															Auto Inputs			
		dBA at 50 feet			Distance to CNEL Contour			Roadway			Segment From - To			ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night			Number of Lanes	Site Condition
L <sub>eq</sub> 24hr	L <sub>dn</sub>	CNEL	70 dBA	65 dBA	60 dBA																					
ID	L <sub>eq</sub> 24hr	L <sub>dn</sub>	CNEL	70 dBA	65 dBA	60 dBA	Roadway			Segment From - To			ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Receiver	Ground Absorption	Lane Distance
1	64.9	68.6	69.0	40	125	396	El Camino Real	the North	Holly St			19,815	35	0.0%	97.3%	2.1%	0.6%	75.0%	10.0%	15.0%	4	Hard	50	0	44	
2	65.1	68.8	69.1	41	130	411	El Camino Real	Holly St	San Carlos Ave			20,545	35	0.0%	97.3%	2.1%	0.6%	75.0%	10.0%	15.0%	4	Hard	50	0	44	
3	65.7	69.4	69.8	48	152	480	El Camino Real	San Carlos Ave	Brittan Ave			23,615	35	0.0%	97.3%	2.1%	0.6%	75.0%	10.0%	15.0%	5	Hard	50	0	56	
4	64.9	68.6	68.9	39	124	392	El Camino Real	Brittan Ave	Howard Ave			19,315	35	0.0%	97.3%	2.1%	0.6%	75.0%	10.0%	15.0%	5	Hard	50	0	56	
5	65.1	68.8	69.2	42	132	419	El Camino Real	Howard Ave	the South			20,625	35	0.0%	97.3%	2.1%	0.6%	75.0%	10.0%	15.0%	5	Hard	50	0	56	
6	63.8	67.5	67.9	31	97	306	Old Country Road	the North	Holly St			18,075	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
7	61.4	65.1	65.5	18	56	176	Old Country Road	Holly St	Brittan Ave			10,390	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
8	64.9	68.6	69.0	40	126	398	Old Country Road	Brittan Ave	Howard Ave			17,000	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
9	63.4	67.1	67.5	28	88	278	Old Country Road	Howard Ave	the South			11,895	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
10	65.3	69.0	69.4	43	137	434	Industrial Road	the North	Holly St			18,195	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44	
11	66.3	70.0	70.4	55	174	549	Industrial Road	Holly St	Brittan Ave			23,030	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44	
12	65.1	68.8	69.2	41	130	413	Industrial Road	Brittan Ave	the South			17,295	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44	
13	59.2	63.0	63.3	11	34	108	Club Drive	San Carlos Ave	the South			13,745	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
14	60.7	64.4	64.8	15	48	152	Alameda de Las Pulgas	San Carlos Ave	Brittan Ave			12,490	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
15	61.0	64.8	65.1	16	52	163	Alameda de Las Pulgas	Brittan Ave	the South			13,445	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
16	61.2	64.9	65.3	17	53	169	Holly Street	the West	El Camino Real			21,490	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
17	58.1	61.9	62.2	8	26	84	Holly Street	El Camino Real	Old Country Rd			10,460	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44	
18	63.0	66.7	67.1	25	81	255	Holly Street	Old Country Rd	Industrial Rd			21,100	25	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44	
19	57.0	60.7	61.1	6	20	64	San Carlos Avenue	Club dr	Alameda de Las Pulgas			5,270	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
20	59.9	63.6	64.0	12	39	125	San Carlos Avenue	Alameda de Las Pulgas	El Camino Real			15,575	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44	
21	59.6	63.3	63.7	12	37	118	Brittan Avenue	the West	Alameda de Las Pulgas			9,685	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
22	59.6	63.3	63.7	12	37	117	Brittan Avenue	Alameda de Las Pulgas	El Camino Real			9,670	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
23	60.2	63.9	64.3	13	42	134	Brittan Avenue	Old Country Rd	Industrial Rd			7,785	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44	
24	58.8	62.5	62.9	10	31	98	Howard Avenue	the West	El Camino Real			9,935	25	0.0%	97.5%	1.5%	1.0%	75.0%	10.0%	15.0%	2	Hard	50	0	20	
25	58.7	62.4	62.8	9	30	95	Howard Avenue	Old Country Rd	the East			5,490	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44	



Traffic Noise Calculator: FHWA 77-108																								
City of San Carlos General Plan Update EIR (COSC-11.0) 2045 With Project Traffic Noise																								
		Output				Inputs																Auto Inputs		
		dBA at 50 feet		Distance to CNEL Contour																				
ID	L <sub>eq-24hr</sub>	L <sub>dn</sub>	CNEL	70 dBA	65 dBA	60 dBA	Roadway			Segment From - To	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance
1	65.7	69.4	69.8	48	150	475	El Camino Real		the North	Holly St	19,920	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
2	65.9	69.6	70.0	50	158	499	El Camino Real		Holly St	San Carlos Ave	20,905	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
3	66.7	70.4	70.8	60	189	597	El Camino Real		San Carlos Ave	Brittann Ave	24,620	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	5	Hard	50	0	56
4	65.7	69.4	69.8	47	150	474	El Camino Real		Brittann Ave	Howard Ave	19,540	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	5	Hard	50	0	56
5	66.0	69.7	70.1	51	160	506	El Camino Real		Howard Ave	the South	20,865	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	5	Hard	50	0	56
6	63.8	67.5	67.9	31	98	309	Old Country Road		the North	Holly St	18,260	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
7	61.3	65.0	65.4	17	55	174	Old Country Road		Holly St	Brittann Ave	10,300	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
8	65.1	68.8	69.2	41	130	412	Old Country Road		Brittann Ave	Howard Ave	17,605	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
9	63.3	67.0	67.4	27	86	273	Old Country Road		Howard Ave	the South	11,690	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
10	65.8	69.5	69.9	48	153	483	Industrial Road		the North	Holly St	20,250	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
11	66.3	70.0	70.4	54	172	542	Industrial Road		Holly St	Brittann Ave	22,735	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
12	65.2	69.0	69.3	43	136	429	Industrial Road		Brittann Ave	the South	18,000	35	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
13	59.7	63.4	63.7	12	37	119	Club Drive		San Carlos Ave	the South	15,105	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
14	60.9	64.7	65.0	16	50	159	Alameda de Las Pulgas		San Carlos Ave	Brittann Ave	13,130	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
15	61.3	65.0	65.4	17	55	174	Alameda de Las Pulgas		Brittann Ave	the South	14,320	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
16	61.5	65.2	65.6	18	57	180	Holly Street		the West	El Camino Real	22,955	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
17	58.2	61.9	62.3	9	27	85	Holly Street		El Camino Real	Old Country Rd	10,680	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
18	63.3	67.0	67.4	28	87	276	Holly Street		Old Country Rd	Industrial Rd	22,820	25	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
19	56.6	60.3	60.7	6	19	59	San Carlos Avenue		Club dr	Alameda de Las Pulgas	4,840	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
20	60.1	63.8	64.2	13	42	132	San Carlos Avenue		Alameda de Las Pulgas	El Camino Real	16,430	25	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
21	59.7	63.4	63.8	12	38	120	Brittann Avenue		the West	Alameda de Las Pulgas	9,865	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
22	59.7	63.4	63.8	12	38	120	Brittann Avenue		Alameda de Las Pulgas	El Camino Real	9,895	30	0.0%	98.5%	1.0%	0.5%	75.0%	10.0%	15.0%	2	Hard	50	0	20
23	60.6	64.3	64.6	15	46	146	Brittann Avenue		Old Country Rd	Industrial Rd	8,450	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44
24	58.9	62.6	63.0	10	32	100	Howard Avenue		the West	El Camino Real	10,205	25	0.0%	97.5%	1.5%	1.0%	75.0%	10.0%	15.0%	2	Hard	50	0	20
25	58.9	62.6	63.0	10	31	100	Howard Avenue		Old Country Rd	the East	5,770	30	0.0%	96.5%	2.0%	1.5%	75.0%	10.0%	15.0%	4	Hard	50	0	44



## APPENDIX D: TRANSPORTATION DATA



# Technical Memorandum

November 8, 2024

Project# 29177

To: Alexis Mena, Placeworks  
Cc: Mark Spencer, Kenny Jeong, W-Trans.  
From: Damian Stefanakis, Anusha Musunuru, Kittelson & Associates, Inc.  
RE: **San Carlos General Plan Reset EIR – VMT Assessment Memorandum**

## INTRODUCTION

Kittelison and Associates (Kittelison) has provided this vehicle miles traveled (VMT) impact assessment for the San Carlos General Plan Reset EIR. This assessment is based on the travel modeling conducted by Kittelson using the San Carlos version of the C/CAG-VTA Countywide Model. This version of the model includes updates to a 2024 existing year and other planned projects within San Carlos.

The VMT assessment is based on the most recent City of San Carlos SB 743 VMT Guidelines that are currently in draft form. The modeling included an assessment of three scenarios, existing 2024 baseline, 2045 No-Build and 2045 General Plan Reset Build.

Land uses were compiled for all three scenarios at the traffic analysis zone (TAZ) level and included conversion of various land use types into model inputs. Model inputs include households, population, and employment for six different categories. The project's land use characteristics were entered into the model in the appropriate location at the TAZ level, model runs were completed, and relevant VMT results were extracted. Buildout land uses used in the forecast modeling are summarized in Appendix A. VMT metrics were assessed for the GP Build scenario compared to the baseline regional average.

## CEQA VMT SCREENING

The VMT Guidelines for CEQA state that Projects that meet certain screening criteria are not required to prepare a VMT assessment for CEQA transportation assessment purposes. However, even if a project is presumed to have a less than significant VMT impact, it may still be required to evaluate the following CEQA requirements listed in Appendix G of the *CEQA Statute & Guidelines* based on the site access and plan review:

- A. Conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities.
- B. Conflict or be inconsistent with CEQA Statute & Guidelines section 15064.3, subdivision.
- C. Substantially increases hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- D. Results in inadequate emergency access.

This analysis focuses on how VMT impacts are identified for the Plan under the Checklist item B.

CEQA screening criteria for land use projects in San Carlos are listed below:

- Small Projects
- Low VMT Areas (per City VMT maps)

- Transit priority areas (TPA) – usually within ½ mile around an existing major transit corridor with frequencies of 15 minutes or better.
- Affordable Housing – 100% restricted affordable residential project in infill locations.
- Neighborhood-serving Retail/ Public Facility

## VMT THRESHOLDS

VMT thresholds are defined using the most recent SB 743 VMT Guidelines prepared for the City of San Carlos that are currently in draft form. These were developed based on recommendations from the California Office of Planning and Research (OPR), dated December 2018. Cities and counties were allowed to develop their own methods, but CEQA impact criteria are mostly consistent with OPR recommendations. The City Council will be adopting these revised VMT guidelines soon.

The City of San Carlos has opted to compare VMT results to a regional baseline average threshold. Based on City guidelines, any development that does not screen out (described above) for a VMT assessment should generate a VMT per service, per capita, or per employee VMT of 15% less than the regional average in order to not incur impacts under CEQA and SB 743.

While some projects may screen out based on proximity to transit or other criteria, this general plan reset buildout is assessed at a programmatic level. In future, more detailed project level VMT analysis may be required to screen out or evaluate individual project applications.

## VMT RESULTS

VMT metrics for San Carlos are compared to the regionwide average and an impact is identified if the total project VMT per service population, per capita and per employee, is higher than the established 15% (0.85) below the county average threshold.

### VMT PER SERVICE POPULATION

At the aggregate level, **Table 1** indicates that the General Plan Reset's overall VMT results generate higher total VMT with the project compared to the 2024 existing baseline. This is to be expected considering the increase in citywide buildout land uses by 2045.

Table 1 also indicates the 2045 project will result in VMT/service population that is higher than 15% below the existing baseline regionwide average (26.51 compared to 23.20), and in aggregate this may likely be considered an impact for CEQA under VMT City Guidelines.

While this result may be considered conservative at the programmatic level, it should be noted the VMT modeling analysis does include VMT associated with existing land uses, which are not easily separated from future land use VMT. Invariably, areawide plans may not be able to achieve baseline targets because of the existing land use VMT. However, if the 2045 citywide project VMT is compared to the 2024 existing baseline VMT for the City, there is a citywide decrease in VMT/Service Population (from 26.82 to 26.51). This suggests the buildout land uses are performing better than existing land uses by shortening average trip lengths' and generally reducing overall VMT.

Also note, while the general plan reset buildout land uses are modeled citywide, many development sites will be strategically concentrated in key development areas within 0.5 miles of high quality transit and therefore per City VMT guidelines they could screen out when assessed at the project level for VMT.

## VMT PER CAPITA

**Table 2** indicates that the 2045 General Plan Reset home-based work VMT per capita is higher than 15% below existing regional baseline (15.84 versus 13.71), and in aggregate may likely be considered an impact for CEQA under VMT City Guidelines.

## VMT PER EMPLOYEE

Similarly, **Table 3** indicates that the 2045 General Plan Reset home-based work VMT per employee is higher than 15% below existing regional baseline (18.55 versus 14.8), and in aggregate may likely be considered an impact for CEQA under VMT City Guidelines.

## CUMULATIVE CONDITIONS

The City VMT Guidelines also recommend computing VMT using the boundary method for cumulative conditions. As stated in the Guidelines, Cumulative Conditions provide a long-range view of future travel patterns based on the region's land use and transportation system projections. Because VMT may fluctuate with population and employment growth, or changes in travel modes, the City Guidelines recommend that any impact analysis should consider the cumulative effects of the proposed project, including other changes, and all other projects. An evaluation of the project's effect on VMT is a comparison of the total boundary VMT within San Mateo County between Cumulative without Project Conditions and Cumulative with Project Conditions. **Table 4** indicates that the 2045 General Plan Reset increases countywide boundary VMT by 159,008, or 0.7%, compared to 2045 No-Build.

**Table 1. VMT per Service Population**

Scenario	Households	Population	Employee	Service VMT	VMT/ Service	15% Below
<b>2024 No-Project</b>						
City	13,253	43,164	20,787	1,714,960	26.82	
County	272,149	792,983	385,023	34,364,121	29.17	
Region	2,767,453	7,750,809	3,850,038	316,943,247	27.32	<b>23.20</b>
<b>2045 No-Project</b>						
City	21,554	64,780	29,311	2,384,653	25.34	
County	332,206	963,941	496,472	42,784,063	29.30	
Region	3,432,942	9,697,102	4,735,624	392,787,195	27.22	
<b>2045 Plus Project</b>						
City	21,554	64,781	47,326	2,972,085	<b>26.51</b>	
County	332,206	963,942	514,487	43,445,984	29.39	
Region	3,432,942	9,697,103	4,753,639	393,579,002	27.24	

SOURCE: KITTELSON & ASSOCIATES, INC., 2024

NOTE: CITY, COUNTY AND REGION ARE SUMMARIZED.

CITY INCLUDES THE PROPOSED GP PROJECT LAND USES

SERVICE POPULATION IS HOUSEHOLD POPULATION + EMPLOYMENT

2045 PLUS PROJECT REDUCES VMT/ SERVICE COMPARED TO EXISTING BUT IS HIGHER THAN 15% BELOW REGION AVERAGE

**Table 2. VMT per Capita**

Scenario	Households	Population	Residential VMT	VMT/capita	15% Below
<b>2024 No-Project</b>					
City	13,253	43,164	735,863	17.05	
County	272,149	792,983	12,743,901	16.07	
Region	2,767,453	7,750,809	124,999,697	16.13	<b>13.71</b>
<b>2045 No-Project</b>					
City	21,554	64,780	1,080,957	16.69	
County	332,206	963,941	14,600,408	15.15	
Region	3,432,942	9,697,102	156,670,594	16.16	
<b>2045 Plus Project</b>					
City	21,554	64,781	1,026,010	<b>15.84</b>	
County	332,206	963,942	14,492,305	15.03	
Region	3,432,942	9,697,103	156,876,303	16.18	

SOURCE: KITTELSON & ASSOCIATES, INC., 2024

NOTE: CITY, COUNTY AND REGION ARE SUMMARIZED.

CITY INCLUDES THE PROPOSED GP PROJECT LAND USES

NET CHANGE IN CITY METRICS IS ASSOCIATED WITH THE GENERAL PLAN RESET

2045 PLUS PROJECT REDUCES VMT/ CAPITA COMPARED TO EXISTING BUT IS HIGHER THAN 15% BELOW REGION AVERAGE

**Table 3. VMT per Employee**

Scenario	Households	Employees	Employee VMT	VMT/ Employee	15% Below
<b>2024 No-Project</b>					
City	13,253	20,787	387,047	18.62	
County	272,149	385,023	7,376,675	19.16	
Region	2,767,453	3,850,038	66,840,112	17.36	<b>14.8</b>
<b>2045 No-Project</b>					
City	21,554	29,311	538,680	18.38	
County	332,206	496,472	9,935,101	20.01	
Region	3,432,942	4,735,624	83,806,389	17.70	
<b>2045 Plus Project</b>					
City	21,554	47,326	877,892	<b>18.55</b>	
County	332,206	514,487	10,356,566	20.13	
Region	3,432,942	4,753,639	84,048,418	17.68	

SOURCE: KITTELSON & ASSOCIATES, INC., 2024

NOTE: CITY, COUNTY AND REGION ARE SUMMARIZED.

CITY INCLUDES THE PROPOSED GP PROJECT LAND USES

NET CHANGE IN CITY METRICS IS ASSOCIATED WITH THE GENERAL PLAN RESET

2045 PLUS PROJECT REDUCES VMT/ EMPLOYEE COMPARED TO EXISTING BUT IS HIGHER THAN 15% BELOW REGION AVERAGE



Table 4. Total Boundary Countywide VMT

Scenario	Boundary VMT	Net Change
<b>2024 No-Project</b>		
City		
County	17,852,477	
<b>2040 No-Project</b>		
City		
County	22,070,724	
<b>2040 Plus Project</b>		
City		
County	22,229,732	159,008 (0.7%)

SOURCE: KITTELSON & ASSOCIATES, INC., 2024

NOTE: ONLY COUNTY BOUNDARY LEVEL VMT IS SUMMARIZED.

NET CHANGE IN METRICS IS ASSOCIATED WITH 2045 PLUS PROJECT VMT COMPARED TO 2045 NO-PROJECT

## CEQA THRESHOLDS OF SIGNIFICANCE

This analysis focuses on how VMT impacts are identified for the Plan under CEQA Checklist item B.

Based on Appendix G: Environmental Checklist Form in the CEQA Statute & Guidelines, a significant transportation-related impact could occur if a project would:

B. Conflict or be inconsistent with CEQA Statute & Guidelines section 15064.3, subdivision (b)

The following summarizes the land use project or land use plan VMT thresholds per the Senate Bill 743 Implementation - VMT Metrics, Thresholds, Screening Criteria, Calculation Methods, and Implementation for Adoption memorandum and the San Carlos City Council Resolution No. 2020-066.

Impacts for the 2045 General Plan Reset project were only assessed under Cumulative Conditions, and are identified for each criterion in **Bold**.

The VMT significance thresholds for land use projects and plans compared to Cumulative conditions are:

1. Project Impact: A significant impact would occur if the total project generated VMT per service population for the project would exceed a level of 15% below the regionwide baseline VMT rate. **IMPACT? Yes.**
2. Project Impact: A significant impact would occur if the home-based project generated VMT per resident for the project would exceed a level of 15% below the regionwide baseline VMT rate. **IMPACT? Yes.**
3. Project Impact: A significant impact would occur if the home-based work project generated VMT per employee for the project would exceed a level of 15% below the regionwide baseline VMT rate. **IMPACT? Yes.**
4. Project Effect: A significant impact would occur if the project increases total (boundary) countywide VMT compared to Cumulative No-Project conditions. **IMPACT? Yes.**

The result indicate, at the programmatic level without further mitigation, the proposed project would be impacted for all VMT criteria under cumulative conditions.

## FINDINGS

The VMT assessment for the San Carlos General Plan Reset was conducted using the C/CAG-VTA countywide model. Land uses were compiled for all three scenarios at the traffic analysis zone (TAZ) level and included conversion of various land use types into model inputs. Model inputs include households, population, and employment for six different categories. The project's land use characteristics were entered into the model in the appropriate location at the TAZ level, model runs were completed, and relevant VMT results were extracted. VMT metrics were assessed for the No Build and GP Build scenario compared to the baseline regional average.

Based on the VMT results, it appears the 2045 General Plan Reset, when assessed at the aggregate programmatic level, would incur VMT impacts under CEQA and would therefore be **significant and unavoidable without further mitigation**.

While this result may be considered conservative at the programmatic level, it should be noted the VMT modeling analysis also includes VMT associated with existing land use VMT, which are not easily separated from future land use VMT. Invariably, areawide plans may not be able to achieve baseline targets because of the existing land use VMT. However, if the 2045 citywide project VMT is compared to the 2024 existing baseline VMT for the City, there is a citywide decrease in VMT/Service Population (from 26.82 to 26.51). This suggests the buildout land uses are performing better than existing land uses by shortening average trip lengths' and generally reducing overall VMT per service population.

Also note, while the general plan reset buildout land uses are modeled citywide, many development sites would be strategically concentrated in key development areas within 0.5 miles of high quality transit, and therefore per City VMT guidelines, they could potentially screen out for VMT when assessed at the project specific level.

## TDM TRIP REDUCTION MITIGATION

This VMT analysis does not account for City TDM ordinances that could contribute to reducing trip making and resulting VMT. A calculation of how much trip reduction is needed indicated that 30% TDM would be required to reduce the VMT/Service Population below the 15% below existing baseline level, from 23.2 to 23.15, to be able to mitigate the Plan at the programmatic level to **Less than Significant**.

# APPENDIX

**Table A1: 2024 Existing Model Land Use Demographics**

ZONE	Total Housing Units	Single-Fam Units	Multi-Fam Units	Total Jobs	Retail Jobs	Service Jobs	Other Jobs	Ag Jobs	Manufacturing Jobs	Wholesale Jobs
1564	1,367	1,335	32	52	-	2	50	-	-	-
1565	890	867	23	2	-	2	1	-	-	-
1566	609	539	70	35	12	15	6	-	-	1
1567	292	222	70	700	-	152	38	-	510	-
1601	-	-	-	4,621	1,567	1,749	1,140	-	34	131
1602	292	222	70	292	20	131	135	-	4	2
1623	1,241	574	667	150	30	98	20	-	-	3
1624	-	-	-	1,927	110	898	875	-	34	9
1669	-	-	-	233	49	61	119	-	-	4
1670	-	-	-	2,374	345	1,036	930	-	34	29
2004	645	215	430	326	-	247	51	-	27	-
2005	858	845	13	2	-	2	1	-	-	-
2006	1,322	1,119	203	2	-	2	1	-	-	-
2007	902	902	-	2	-	2	1	-	-	-
2008	1,519	1,383	136	2	-	2	1	-	-	-
2009	2,057	583	1,474	2,120	282	949	866	-	-	24
2010	-	-	-	7,910	30	2,369	86	-	5,423	3
2018	1,259	867	392	35	12	15	6	-	-	1
<b>TOTAL</b>	<b>13,253</b>	<b>9,673</b>	<b>3,580</b>	<b>20,787</b>	<b>2,458</b>	<b>7,729</b>	<b>4,328</b>	<b>-</b>	<b>6,068</b>	<b>205</b>

**Table A2: 2045 No Build Model Land Use Demographics**

<b>ZONE</b>	<b>Total Housing Units</b>	<b>Single-Fam Units</b>	<b>Multi-Fam Units</b>	<b>Total Jobs</b>	<b>Retail Jobs</b>	<b>Service Jobs</b>	<b>Other Jobs</b>	<b>Ag Jobs</b>	<b>Manufacturing Jobs</b>	<b>Wholesale Jobs</b>
1564	1,676	1,344	332	52	-	2	50	-	-	-
1565	1,399	876	523	2	-	2	1	-	-	-
1566	1,409	539	870	35	12	15	6	-	-	1
1567	592	222	370	700	-	152	38	-	510	-
1601	-	-	-	10,503	1,201	7,379	1,140	-	684	100
1602	592	222	370	292	20	131	135	-	4	2
1623	2,483	574	1,909	121	13	87	20	-	-	1
1624	-	-	-	2,406	84	1,353	875	-	87	7
1669	-	-	-	233	49	61	119	-	-	4
1670	-	-	-	3,250	333	1,925	930	-	35	28
2004	645	215	430	326	-	247	51	-	27	-
2005	867	854	13	2	-	2	1	-	-	-
2006	2,532	1,129	1,403	2	-	2	1	-	-	-
2007	1,402	902	500	2	-	2	1	-	-	-
2008	2,219	1,383	836	2	-	2	1	-	-	-
2009	3,679	583	3,096	2,120	282	949	866	-	-	24
2010	-	-	-	9,226	30	3,885	86	-	5,223	3
2018	2,059	867	1,192	35	12	15	6	-	-	1
<b>TOTAL</b>	<b>21,554</b>	<b>9,710</b>	<b>11,844</b>	<b>29,311</b>	<b>2,035</b>	<b>16,209</b>	<b>4,328</b>	<b>-</b>	<b>6,570</b>	<b>170</b>

**Table A3: 2045 General Plan Reset Buildout Model Land Use Demographics**

<b>ZONE</b>	<b>Total Housing Units</b>	<b>Single-Fam Units</b>	<b>Multi-Fam Units</b>	<b>Total Jobs</b>	<b>Retail Jobs</b>	<b>Service Jobs</b>	<b>Other Jobs</b>	<b>Ag Jobs</b>	<b>Manufacturing Jobs</b>	<b>Wholesale Jobs</b>
1564	1,461	1,344	117	52	-	2	50	-	-	-
1565	1,127	876	251	2	-	2	1	-	-	-
1566	1,116	539	577	36	18	12	5	-	-	2
1567	1,222	222	1,000	960	6	356	88	-	510	1
1601	-	-	-	12,177	1,148	9,626	1,140	-	168	96
1602	327	222	105	292	20	131	135	-	4	2
1623	2,665	574	2,091	460	42	337	78	-	-	4
1624	-	-	-	4,399	47	3,354	875	-	119	4
1669	-	-	-	233	49	61	119	-	-	4
1670	-	-	-	5,266	296	3,947	930	-	69	25
2004	645	215	430	326	-	247	51	-	27	-
2005	867	854	13	2	-	2	1	-	-	-
2006	2,246	1,129	1,117	2	-	2	1	-	-	-
2007	1,130	902	228	2	-	2	1	-	-	-
2008	1,976	1,383	593	2	-	2	1	-	-	-
2009	4,016	583	3,433	2,740	426	1,337	942	-	-	36
2010	990	-	990	20,337	72	10,075	184	-	10,000	6
2018	1,766	867	899	36	18	12	5	-	-	2
<b>TOTAL</b>	<b>21,554</b>	<b>9,710</b>	<b>11,844</b>	<b>47,326</b>	<b>2,142</b>	<b>29,503</b>	<b>4,606</b>	<b>-</b>	<b>10,897</b>	<b>179</b>



APPENDIX E:  
PROPOSED GENERAL PLAN  
AMENDMENTS





## Appendix E: Proposed General Plan Amendments

This document presents proposed amendments to the San Carlos 2030 General Plan.

Underlined text represents language that has been added to the General Plan; text with ~~striketrough~~ has been deleted from the General Plan. This document focuses on non-formatting changes to the policies and actions of the General Plan and does not include changes to the General Plan format, background information, or narrative language.

### Front Matter

**Land Acknowledgement:** The City of San Carlos acknowledges that our lands are located on the ancestral homeland of the Ramaytush Ohlone peoples, and that, as the original stewards of this land, the Ramaytush Ohlone understood the interconnectedness of all things and maintained harmony with nature for millennia.

### Chapter 3 – Land Use Element

- **Action LU-1.1:** Continue to evaluate the Transportation Demand Management Ordinance to encourage mode shift ~~Amend the Zoning Ordinance to create a Transportation Demand Management Ordinance that contains strategies to enhance travel patterns and~~ to reduce vehicular trip generation from new development ~~by 20 percent.~~
- **Policy LU-4.3:** Annexation of undeveloped parcels shall be in substantial compliance with the following criteria:
  - a. The parcels are contiguous to parcels located in the City of San Carlos and contiguous or provisions have been made to become contiguous to city streets.
  - b. Require minimum lot size in hillside areas considered for subdivision or annexation to be larger than lots on flat areas to minimize slope instability, erosion and drainage impacts. Lots shall meet, or shall be merged to meet, the minimum lot size established in the subdivision ordinance.
  - c. Parcels with development potential of five or more lots shall cluster single-family detached homes ~~utilizing the Planned Community PC zone~~ to the degree feasible. In such cases the density may not exceed the density permitted by the lot size standards of the San Carlos Subdivision Ordinance. Further, the provisions related to portions of the development which must remain ungraded shall apply. Only the lot size requirements may vary. In such cases, the minimum lot size shall be 10,000 square feet.
- **Policy LU-4.6** Parcels proposed for annexation to the City shall be prezoned.
  - a. Undeveloped Residential Parcels. Parcels with development potential of five or more lots shall be zoned to Planned Community ~~(with minimum R-1-LD Development Standards)~~ Development with minimum RS-3 development standards prior to approval of a Tentative Subdivision Map. Parcels with development potential of less than five lots shall be prezoned RS-3.
  - b. ~~Other parcels proposed for annexation shall be prezoned R-1-LD Low-Density, Single-Family Residential District.~~ Developed residential parcels and parcels with development potential for

## Appendix E: Proposed General Plan Amendments

nonresidential use shall be rezoned consistent with surrounding and/or like zoning district classifications which represent uses intended for the property.

- **Policy LU-5.16:** Identify, develop and implement ~~Redevelopment Agency sponsored~~ programs and other public/private partnership developments to help facilitate economic development.
- **Policy LU-5.17:** Encourage the development as well as improvements to the ingress and egress on the following public parking lots ~~plazas~~: South Plaza, Williams Plaza, Wheeler Plaza and Clark Plaza. Encourage the consolidation and acquisition of parcels when opportunities become available to expand the public parking lots ~~plazas~~, provide improved ingress and egress and improve the efficiency of design.
- **Action LU-7.1:** Continue to implement the City's adopted Bicycle and Pedestrian Master Plan adopted on June 9<sup>th</sup>, 2020 and update the Master Plan as needed. Prepare a community study to seek new ways to enhance walkability and connect all areas of the community. The current Bicycle Transportation Plan could be expanded to be a Bicycle and Pedestrian Transportation Plan.
- **Policy LU-8.19:** Residential structures shall be de- signed to be compatible with existing structures in the vicinity, avoid obstructing views from adjacent structures or views of community importance, avoid interference with the right or ability to use solar energy and be consistent with the Objective Design Standards ~~community design principles~~.
- **Policy LU-12.1:** Evaluate historical, cultural, and tribal cultural resources early in the development review process through consultation with interested parties.
- **Action LU-12.1:** Ensure thorough compliance with the provisions of the California Environmental Quality Act (CEQA) relating to potential impacts to cultural, ~~and~~ historical, and tribal cultural resources.
- **Action LU-12.6:** The City of San Carlos shall develop mapping to indicate areas in the City with archaeological sensitivity and guidance documentation for public and private construction projects that involve ground disturbance activities in areas with archaeological sensitivity. The requirements may include 1) an archeological records search, 2) construction training for cultural sensitivity, and 3) procedures if archaeologic resources are discovered.

## Chapter 5 – Circulation and Scenic Highways Element

- **Policy CSH-3.1:** Strive to reduce baseline and development-related traffic by implementing and enforcing the Transportation Demand Management Ordinance ~~20 percent through public-private partnership efforts~~.
- **Policy CSH-3.3:** Support the incorporation of Transportation Demand Management measures in new development to reduce traffic impacts.
- **Policy CSH-3.7:** Public sidewalks and walkways shall be designed to accommodate access in accordance with the Americans with Disabilities Act, and including any other applicable State and federal laws, regulations and guidelines, and shall be kept clear of obstruction.

## Appendix E: Proposed General Plan Amendments

- **Policy CSH-3.8** The City shall ~~strive to maintain intersection~~ continue to evaluate service levels ~~above the mid-range of level D (not to exceed a Volume-to-Capacity Ratio (V/C) of .85 or a total average delay time at intersections of 45 seconds whenever V/C Ratio is not available)~~ metrics as provided by the City's Transportation Impact Analysis (or Transportation Study) Guidelines as adopted November 12, 2024, Resolution 2024-118. The City recognizes that certain development project(s) may cause this level of service goal these thresholds to be exceeded. The City may approve such development project(s) if specific economic, legal, social, technological, or other benefits outweigh the ~~adverse effects of exceeding the mid-range level D goal~~ thresholds as set forth in the Transportation Study Guidelines.
- **Action CSH-3.2:** The City shall consider adoption of a Transportation Impact Fee for new development to support city-wide Transportation Demand Management measures.
- **Policy CSH-4.2:** Reduce potential conflicts, safety hazards and physical obstacles between bicyclists, automobiles and pedestrians and ensure compliance with the Americans with Disabilities Act, and including any other applicable State and federal laws, regulations and guidelines.

## Chapter 6 – Environmental Management

- **Action EM-1.5:** Require that major new buildings and taller structures that extend above the existing surrounding urban fabric and height of the tree canopy be designed to minimize the potential risk of bird collisions using input from the latest bird-safe design guidelines and best management practice strategies to reduce bird strikes.

## Chapter 7 – Parks and Recreation

- **Policy PR-2.3:** Continue to support implementation of trail connections as identified in the City's Master Plan for Parks, Open Space, Buildings and other Recreation Facilities Potential Trail Connections Plan.
- **Policy PR-3.7:** Protect the Youth Center as a valuable venue ~~exclusively for~~ giving priority to youth activities and programs as subject to the terms in the Youth Center Use Policy adopted by City Council.

## Chapter 9 – Noise

- **Policy NOI-1.8:** ~~During all phases of construction activity, reasonable noise reduction measures shall be utilized to minimize the exposure of neighboring properties to excessive noise levels.~~
  - ~~a. Construction~~ All construction activities shall comply with the City's noise ordinance. Development projects that require an acoustical study shall incorporate reasonable noise and vibration reduction measures and best management practices to minimize excessive noise levels during all phases of construction activity. Reduction measures and best management practices may include, but are not limited to, noise control techniques for construction tools and equipment, construction site management techniques, temporary noise barriers, noise monitoring and reporting, and/or construction traffic management.

## Appendix E: Proposed General Plan Amendments

- **Policy NOI-1.12:** Ensure consistency with the noise compatibility policies and criteria contained in the ~~San Carlos Airport Land Use Plan~~ Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport.