



DRAFT ENVIRONMENTAL IMPACT REPORT

Sage Ranch Development Project
February 2020

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Draft Environmental Impact Report
Sage Ranch Development Project

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Executive Summary

EXECUTIVE SUMMARY

Introduction

This Draft Environmental Impact Report (EIR) has been prepared consistent with the California Environmental Quality Act (CEQA). Its intent is to inform the public, regulatory agencies and the City of Tehachapi decision makers of the potential environmental impacts the proposed Project would have on environmental factors as specified in the CEQA Guidelines. This EIR, in its entirety, addresses and discloses potential environmental effects associated with construction and operation of the proposed Project, including direct, indirect, and cumulative impacts to the environmental resources identified in the CEQA Guidelines environmental checklist. The City of Tehachapi is the “Lead Agency” pursuant to CEQA and is responsible for the preparation and distribution of the EIR.

CEQA Process

An Initial Study and Notice of Preparation (IS/NOP) was prepared by the City for the proposed Project. The IS/NOP was properly noticed and circulated pursuant to CEQA Guidelines for public review from July 1, 2019 – August 4, 2019.

The next step in the process is circulation of this EIR which will be distributed to the public for review and comment for at least 45 days. This EIR is organized as follows:

Executive Summary: Summarizes the analysis contained in the EIR.

Chapter 1 – Introduction: Provides a brief introduction to CEQA and the scope/contents of the DEIR.

Chapter 2 – Project Description: Describes the Project in detail. Includes Project location, objectives, environmental setting and regulatory context.

Chapter 3 – Environmental Analysis: Contains the CEQA checklist. Each topic discusses environmental/regulatory setting, Project impact analysis, mitigation measures and conclusions.

Chapter 4 – Cumulative Impacts: Summarizes cumulative impacts discussed in Chapter 3.

Chapter 5 – Alternatives: Describes and evaluates alternatives to the Project. The proposed Project is compared to each alternatives and potential environmental impacts are analyzed.

Chapter 6 – Other CEQA Sections: Describes other required sections such as environmental effects that cannot be avoided, social effects, growth inducement, etc.

Appendices: Following the text of the EIR, several appendices and technical studies have been included as reference material.

Project Location

The proposed Project is located on approximately 138-acres in the City of Tehachapi, California, and is bounded by Valley Boulevard to the north, Tract 6212 to the west, Pinon Street to the south and Tehachapi High School to the east. The site is comprised of four parcels: 417-012-01, 417-012-24, 417-012-25, and 417-012-28. See Figures 2-1 and 2-2 – Regional Map and Aerial Map, respectively.

The proposed Project site is located in the southeastern area of Tehachapi, southeast of downtown in an area that generally consists of single-family housing, multi-family housing, schools and churches. The site is currently zoned T-4 (General Urban) and is designated by the General Plan as 4B – Southern Neighborhoods.

Project Description Summary

The Project Applicant is proposing to subdivide and develop approximately 138-acres of T-4 zoned land into a residential community with a mix of single-family and multi-family housing units. The proposal features eight different types of housing products for a total of 1,000 residential units at buildout. The eight different types of housing features detached products (52%) and attached products (48%). Please refer to Chapter Two – Project Description for full details on the Project. A brief description of housing types is shown in Table 2-1 and the proposed Site Layout Plan is shown in Figure 2-3.

Project Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the City of Tehachapi's Project objectives:

- To provide a variety of housing opportunities with a range of densities, styles, sizes and values that will be designed to satisfy existing and future demand for quality housing in the area.
- To provide a sense of community and walkability within the development through the use of street patterns, parks/open space areas, landscaping and other Project amenities.
- To provide a residential development that is compatible with surrounding land uses and is near major services.
- To provide a residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

Summary of Environmental Impacts

The IS/NOP determined the Project could have potentially significant impacts (and/or potential areas of controversy) in the following areas:

- Air Quality
- Biology
- Energy
- Greenhouse Gases / Climate Change
- Hydrology / Water Quality
- Land Use / Planning
- Noise
- Population / Housing
- Public Services
- Transportation
- Utilities

As described in Chapter 3, it was determined that all impacts were either less than significant, or could be mitigated to a less than significant level. Mitigation measures are listed in Table ES-1, Mitigation Monitoring and Reporting Program.

Summary of Project Alternatives

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed Project that could feasibly attain most of the objectives of the proposed Project. This EIR analyzed the following alternatives:

- No Project Alternative (site remains vacant and unused)
- Alternate Site
- Reduced (50%) Project

See Chapter 4 – Alternatives for a full description of potential environmental impacts associated with each alternative.

Mitigation Monitoring and Reporting Program

State law requires that a public agency adopt a monitoring program for mitigation measures that have been incorporated into the approved Project to reduce or avoid significant effects on the environment. The purpose of the monitoring program is to ensure compliance with environmental mitigation during Project implementation and operation. Since there are potentially significant impacts requiring mitigation associated with the Project, a Mitigation Monitoring Program will be included in the Project's Final EIR and is included herein on the following pages.

Draft Environmental Impact Report
Sage Ranch Development Project
Mitigation Monitoring and Reporting Program

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
Air Quality							
AIR-1	<u>Land Preparation, Excavation and/or Demolition</u> - The following dust control measures shall be implemented: • All soil excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations. • All clearing, grading, earth moving and excavation activities should cease during periods of winds greater than 20 mph (averaged over one hour), if disturbed material is	Prior to issuance of grading permits and during construction	Verification by City and Construction Contractor	City of Tehachapi and Construction Contractor			

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Sage Ranch Development Project
Mitigation Monitoring and Reporting Program

	<p>easily windblown, or when dust plumes of 20% or greater opacity impact public roads, occupied structures or neighboring property.</p> <ul style="list-style-type: none">• All fine material transported offsite should be either sufficiently watered or securely covered to prevent excessive dust.• If more than 5,000 cubic yards of fill material will be imported or exported from the site, then all haul trucks should be required to exit the site via an access point where a gravel pad or grizzly has been installed.• Areas disturbed by clearing, earth moving or excavation activities should be minimized at all times.• Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to						
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Mitigation Monitoring and Reporting Program

	<p>prevent wind-blown fugitive dust.</p> <ul style="list-style-type: none"> Where acceptable to the fire department, weed control shall be accomplished by mowing instead of discing, thereby, leaving the ground undisturbed and with a mulch covering. 						
AIR-2	<p><u>Building Construction</u> - After clearing, grading, earth moving and/or excavating, the following dust control practices shall be implemented:</p> <ul style="list-style-type: none"> Once initial leveling has ceased all inactive soil areas within the construction site shall either be seeded and watered until plant growth is evident, treated with a dust palliative, or watered twice daily until soil has sufficiently crusted to prevent fugitive dust emission. All active disturbed soil areas shall be sufficiently watered to 	Prior to issuance of grading permits and during construction	Verification by City and Construction Contractor	City of Tehachapi and Construction Contractor			

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Mitigation Monitoring and Reporting Program

	prevent excessive dust, but no less than twice per day.						
AIR-3	<u>Dust</u> <ul style="list-style-type: none"> Onsite vehicle speed shall be limited to 15 mph. All areas with vehicle traffic shall be paved, treated with dust palliatives, or watered a minimum of twice daily. Streets adjacent to the project site shall be kept clean and accumulated silt removed. Access to the site shall be by means of an apron into the Project from adjoining surfaced roadways. The apron shall be surfaced or treated with dust palliatives. If operating on soils that cling to the wheels of the vehicles, a grizzly or other such device shall be used on the road exiting the Project, immediately prior to the pavement, in order to remove 	Prior to issuance of grading permits and during construction	Verification by City and Construction Contractor	City of Tehachapi and Construction Contractor			

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Mitigation Monitoring and Reporting Program

	most of the soil material from the vehicle's tires.						
AIR-4	<u>Tailpipe Emissions</u> <ul style="list-style-type: none"> • Properly maintain and tune all internal combustion engine powered equipment. • Require employees and subcontractors to comply with California's idling restrictions for compression ignition engines. • Use low sulfur (CARB) diesel fuel. 	Prior to issuance of grading permits and during construction	Verification by City and Construction Contractor	City of Tehachapi and Construction Contractor			
AIR-5	<u>Equipment Exhaust</u> <ul style="list-style-type: none"> • Maintain all construction equipment as recommended by manufacturer manuals. • Shut down equipment when not in use for extended periods of time. 	Prior to issuance of grading permits and during construction	Verification by City and Construction Contractor	City of Tehachapi and Construction Contractor			

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Mitigation Monitoring and Reporting Program

	<ul style="list-style-type: none"> • Construction equipment shall operate no longer than eight (8) cumulative hours per day. • Use electric equipment for construction whenever possible in lieu of diesel or gasoline powered equipment. • All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_x emissions. • On-Road and Off-Road diesel equipment shall use diesel particulate filters if permitted under manufacturer's guidelines. • Use of Caterpillar pre-chamber diesel engines or equivalent shall be utilized if economic and available to reduce NO_x emissions. • All construction workers shall be encouraged to shuttle (car-pool) to retail 						
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Mitigation Monitoring and Reporting Program

	<p>establishments or to remain on-site during lunch breaks.</p> <ul style="list-style-type: none"> • All construction activities within the project area shall be discontinued during the first stage smog alerts. • Construction and grading activities shall not be allowed during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds 0.20 ppm (1-hour average). 						
Biological Resources							
BIO - 1	<p><u>Protection of Nesting Tricolored Blackbirds:</u> To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August. If it is not possible to schedule construction between September and January, a pre-construction clearance survey for nesting tricolored blackbirds shall be conducted by a qualified</p>	<p>Prior to issuance of grading permits</p>	<p>Various Actions: Retention of professional biologist/submittal of Report of Findings, if applicable.</p>	<p>City of Tehachapi</p>			

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	<p>biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the start of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and within 350 feet of the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist in consultation with the CDFW shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has failed for non-construction related reasons.</p>						
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Mitigation Monitoring and Reporting Program

BIO - 2	<p><u>Protection of Nesting Birds</u></p> <p>To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August. If it is not possible to schedule construction between September and January, a pre-construction clearance survey for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the start of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas, including within 250 feet in the case of raptor nests. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a</p>	Prior to issuance of grading permits	Various Actions: Retention of professional biologist/submittal of Report of Findings, if applicable.	City of Tehachapi			
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	construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has failed for non-construction related reasons.						
Hydrology / Water Quality							
HYD - 1	<u>Water Quality Protection:</u> Prior to clearing, grading, and disturbances to the ground such as stockpiling, or excavation, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ). The SWPPP shall be designed with Best Management Practices (BMPs) that the RWQCB	Prior to issuance of grading permits	SWPPP and General Permit for Stormwater Discharge	Regional Water Quality Control Board and City of Tehachapi			

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	has deemed as effective at reducing erosion, controlling sediment, and managing runoff. These include: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. Sediment control BMPs, installing silt fences or placing straw wattles below slopes, installing berms and other temporary run-on and runoff diversions. These BMPs are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Final selection of BMPs will be subject to approval by City of Tehachapi and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.						
HYD - 2	<u>Outdoor Watering:</u> All outdoor public landscaping, with the exception of private back or side yards, shall be irrigated with non-potable water. The Project will be required to secure the non-	Prior to issuance of building permits	Verification by City	City of Tehachapi			

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	potable water prior to issuance of building permits.						
HYD - 3	<u>Acquisition of Water:</u> The Project proponent shall procure per-unit water rights sufficient to meet the projected water demand as calculated in the Project Water Supply Assessment (Appendix E). Alternatively, the Project shall pay a per-unit water rights entitlement fee in accordance with City ordinances to this same effect. This shall be made a condition of Project approval.	Prior to issuance of building permits	Verification by City	City of Tehachapi			
Public Services							
PUB - 1	<u>Fire Protection Services:</u> Prior to issuance of building permits, the Project Applicant shall pay fire service impact fees for new development. The fee, or equivalent in-lieu, will be determined by the Kern County Fire Department in conjunction with the City of Tehachapi.	Prior to issuance of building permits	Verification of City Approval	City of Tehachapi			
PUB - 2	<u>Police Protection Services:</u> Prior to issuance of building permits, the Project Applicant shall pay police service impact fees for new development. The fee, or equivalent in-lieu, will be	Prior to issuance of building permits	Verification of City Approval	City of Tehachapi			

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	determined by the City of Tehachapi.						
PUB - 3	<u>School Impact Fees:</u> Prior to issuance of building permits, the Project Applicant shall pay school impact fees. The State Allocation Board sets the maximum per-square-foot Level 1 school impact fees every two years (even) that is imposed on new development. The Project's school impact fees will be determined by the Tehachapi Unified School District.	Prior to issuance of building permits	Verification of City Approval	City of Tehachapi and Tehachapi Unified School District			
Transportation / Traffic							
TRA - 1	The Project will be responsible for paying the Tehachapi Region Transportation Impact Fee to contribute to transportation improvement projects in the city of Tehachapi and surrounding county areas.	Prior to issuance of building permits	Verification of City Approval	City of Tehachapi			
TRA - 2	The Project will be responsible for paying its fair share cost percentages and/or constructing the recommended improvements identified in Table 3.17-11 and Table 3.17-12, subject to reimbursement for the costs that are in excess of the Project's equitable responsibility as determined by the City. This will be	Prior to issuance of grading permits	Verification of City Approval	City of Tehachapi			

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	itemized and enforced through conditions of approval or a development agreement, at the discretion of the City.						
Utilities							
UTIL - 1	Prior to issuance of building permits, the Project Applicant shall pay impact fees for its fair share of sewer services. The fee, or equivalent in-lieu, will be determined by the City of Tehachapi.	Prior to Issuance of Building Permits	Verification of City Approval	City of Tehachapi			

Chapter 1

INTRODUCTION

1.0 INTRODUCTION

This Focused Environmental Impact Report (EIR or Draft EIR) has been prepared on behalf of the City of Tehachapi (City) in accordance with the California Environmental Quality Act (CEQA). This chapter outlines the purpose of and overall approach to the preparation of the EIR for the proposed Project. The Project Applicant is proposing to subdivide and develop approximately 138-acres of vacant land into a 1,000-unit residential community with a mix of single-family and multi-family housing units. The proposed Project is bounded by Valley Boulevard to the north, Tract 6212 to the west, Pinon Street to the south and Tehachapi High School to the east. The proposed Project is more fully described in Chapter Two – Project Description.

An EIR responds to the requirements of CEQA as set forth in Sections 15126, 15175, and 15176 of the CEQA Guidelines. The Planning Commission and City Council will use the EIR during the public review process in order to understand the potential environmental implications associated with implementing the Project.

1.1 Purpose of EIR

The City of Tehachapi, as Lead Agency, determined that the proposed activities constitute a “project” within the definition of CEQA. The preparation of an EIR is required by CEQA prior to approving any project that may have a significant impact on the environment. For the purposes of CEQA, the term “project” refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

This Draft EIR has been prepared according to CEQA requirements to evaluate the potential environmental impacts associated with the implementation of the proposed Project. The Draft EIR also discusses alternatives to the Project, and proposes mitigation measures that will offset, minimize, or otherwise avoid significant environmental impacts. This Draft EIR has been prepared in accordance with CEQA, California Resources Code Section 21000 et seq.; the Guidelines for the California Environmental Quality Act (California Code of Regulations, Title 14, Chapter 3); and the rules, regulations, and procedures for implementing CEQA as adopted by the City of Tehachapi.

An EIR must disclose the expected direct and indirect environmental impacts associated with a project, including impacts that cannot be avoided, growth-inducing effects, impacts found not to

be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development.

1.2 Type of EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project-level EIR pursuant to CEQA Guidelines Section 15161. A Project-level EIR is described in State CEQA Guidelines § 15161 as: “The most common type of EIR (which) examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation. The project-level analysis considers the broad environmental effects of a proposed project.

1.3 Intended Uses of the EIR

The City of Tehachapi, as the Lead Agency, has prepared this EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from implementation of the proposed Project. The environmental review process enables interested parties to evaluate the proposed project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the project. While CEQA requires that consideration be given to avoiding adverse environmental effects, the lead agency must balance adverse environmental effects against other public objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with the Project. This EIR may also be used by other agencies within Kern County, including the Air District, which may use this EIR during the permitting process.

1.4 Known Responsible and Trustee Agencies

The term “Responsible Agency” includes all public agencies other than the Lead Agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines Section 15381). For the purpose of CEQA, a “Trustee” agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386). The Project may require permits and approvals from Trustee and Responsible Agencies, which may include the following:

- Regional (Central Valley) Water Quality Control Board (RWQCB)
- Eastern Kern Air Pollution Control District (EKAPCD)

1.5 Environmental Review Process

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

Notice of Preparation

The City of Tehachapi circulated a Notice of Preparation (NOP) of an EIR for the proposed project on July 1, 2019 to trustee and responsible agencies, the State Clearinghouse (SCH #2019070009), and the public. Four public or agency comments on the NOP related to the EIR analysis were presented or submitted during the public review period. Written comments provided to the City during the 30-day public review period for the NOP, which ended on August 3, 2019, are presented in Appendix A.

Draft EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of the project’s direct and indirect impacts on the environment, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City of Tehachapi

will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period.

Public Notice/Public Review

Concurrent with the NOC, the City of Tehachapi will provide a public notice of availability for the Draft EIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA requirements, the review period for this Draft EIR is fortyfive (45) days. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

Jay Schlosser, Development Services Director
 City of Tehachapi
 115 S. Robinson Street
 Tehachapi, CA 93561

Responses to Comments/Final EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments during such review period.

Entitlement Procedures / Certification of the EIR / Project Consideration

The Project is proposed to be processed as a Planned Development Zone which is found in Chapter 3.30.160 of the City's Zoning Code. The Planned Development Zone is a mechanism that allows for a flexible regulatory procedure by which the General Plan and Zoning Code may be accomplished and is appropriate for comprehensive site planning of large parcels. Various approvals by the City (Planning Commission and City Council) are required for the Final Master Development Plan which will include the following components:

- Final/complete site plan
- Proposed floor plans / elevations
- Tentative tract map
- CEQA documents and technical studies
- Associated studies, maps and reports

Upon approval of the Final Master Development Plan by the City Council, the Applicant is required to submit Precise Development Plans for each phase or increment of construction and must provide a level of detail satisfactory to the City Engineer. The Planning Commission considers each Precise Development Plan as they are submitted.

The City of Tehachapi will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete," the City Council may certify the Final EIR in accordance with CEQA. As set forth by CEQA Guidelines Section 15151, the standards of adequacy require an EIR to provide a sufficient degree of analysis to allow decisions to be made regarding the proposed project that intelligently take account of environmental consequences.

Upon review and consideration of the Final EIR, the City Council may take action to approve, revise, or reject the project. A decision to approve the proposed project, for which this EIR identifies significant environmental effects, must be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 15093. A Mitigation Monitoring and Reporting Program (MMRP) would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. The Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during project implementation, in a manner that is consistent with the EIR.

1.6 Organization and Scope

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the project, environmental and planning documentation prepared for recent projects located within the City of Tehachapi, and responses to the Notice of Preparation (NOP). This Draft EIR is organized in the following manner:

Executive Summary

The Executive Summary summarizes the characteristics of the proposed project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the project's environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed project.

Chapter 1.0 – Introduction

Chapter 1.0 briefly describes the proposed project, the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, identifies the scope and organization of the Draft EIR, and summarizes comments received on the NOP.

Chapter 2.0 – Project Description

Chapter 2.0 provides a detailed description of the proposed project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, subsequent projects and activities, and a list of related agency action requirements.

Chapter 3.0 – Environmental Setting, Impacts and Mitigation Measures

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.
Regulatory Setting. A description of the regulatory environment that may be applicable to the project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics are addressed in this Draft EIR:

- Air Quality
- Biological Resources
- Energy
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Transportation and Traffic
- Utilities and Services

Chapter 4.0 – Cumulative Impacts

Chapter 4.0 discusses potential cumulative impacts resulting from project implementation. Cumulative impacts can result from the proposed project alone, or together with other projects. A cumulative impact of concern under CEQA occurs when the net result of combined individual impacts compounds or increase other overall environmental impacts.

Chapter 5.0 – Project Alternatives

Chapter 5.0 provides a comparative analysis between the merits of the proposed project and the selected alternatives. State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and avoid and/or lessen any significant environmental effects of the project.

Chapter 6.0 – Other CEQA-Required Topics

Chapter 6.0 evaluates and describes the following CEQA required topics: growth-inducing effects, significant and irreversible effects, significant and unavoidable impacts, substantial adverse effects on protected fish, wildlife, and plant species, substantial adverse effects on human beings, and effects not found to be significant.

Chapter 7.0 – Report Preparers

Chapter 7.0 lists all authors and agencies that assisted in the preparation of the Draft EIR, by name, title, and company or agency affiliation.

Appendices

This section includes the NOP and responses to the NOP in addition to biological, water, air quality/GHG, and traffic technical studies.

1.7 – Summary of Comments Received on the Notice of Preparation

The Notice of Preparation and Initial Study were circulated for public review from July 1, 2019 through August 3, 2019. The City received four comment letters which are included in Appendix A. The letters are summarized as follows:

1. **Kern County Public Health Services Department:** Commented that the method of water supply and sewage disposal for the Project shall be approved by the Environmental Health Division.
2. **Tehachapi-Cummings County Water District:** Concurred with the Initial Study that a Water Supply Assessment should be required for the Project.
3. **State Water Resources Control Board:** Commented that the City will need to demonstrate enough water source capacity to support the Project and that an amended permit may be needed from the Board.
4. **Native American Heritage Commission:** Commented that the City will need to comply with AB 52 and SB 18 (pertaining to Tribal Consultation).

Chapter 2

PROJECT DESCRIPTION

Project Description

2.1 Project Location and Surrounding Land Use

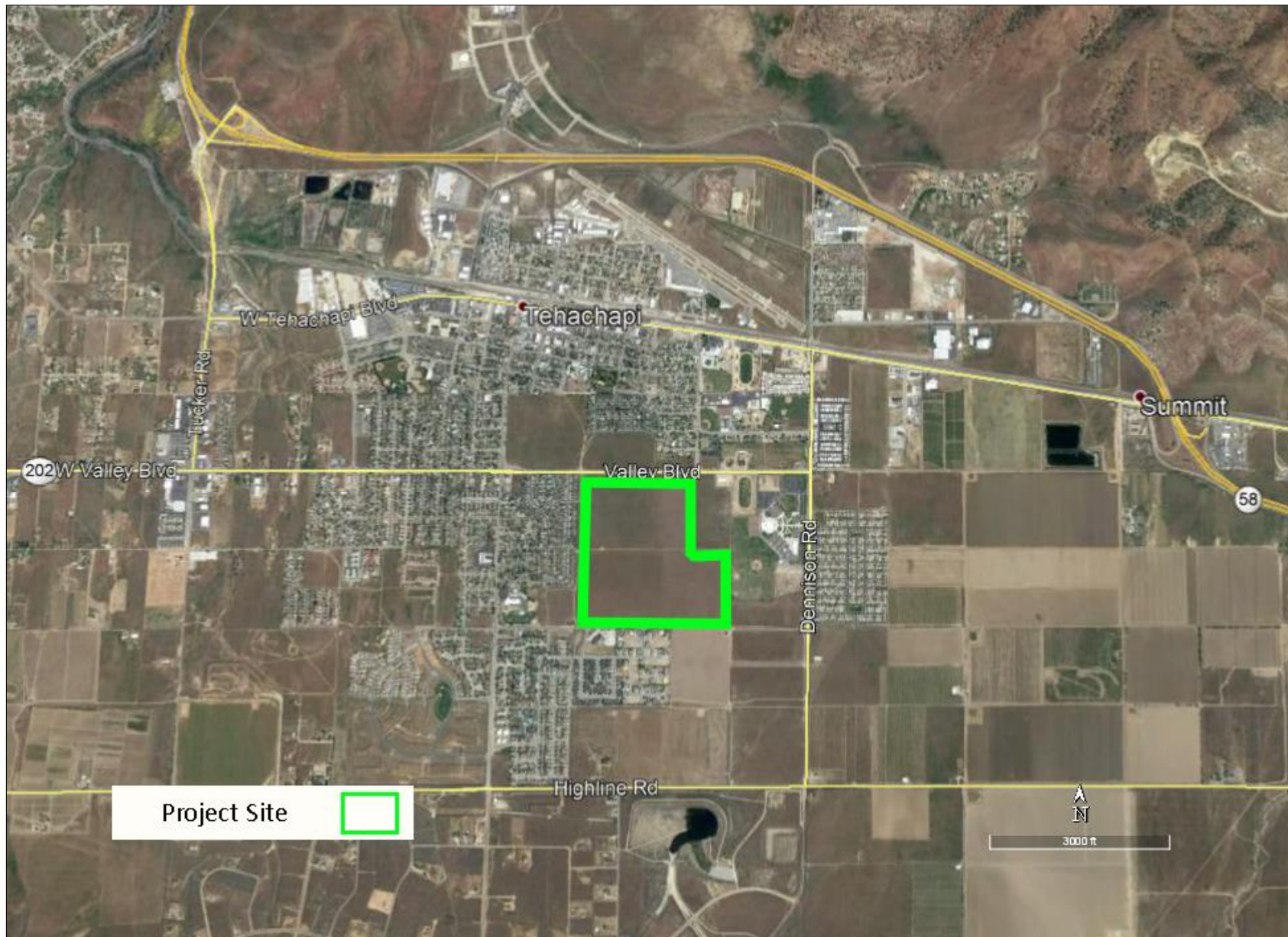
The proposed Project is located on approximately 138-acres in the City of Tehachapi, California, and is bounded by Valley Boulevard to the north, Tract 6212 to the west, Pinon Street to the south and Tehachapi High School to the east. The site is comprised of four parcels: 417-012-01, 417-012-24, 417-012-25, and 417-012-28. See Figures 2-1 and 2-2 – Regional Map and Aerial Map, respectively.

The proposed Project site is located in the southeastern area of Tehachapi, southeast of downtown in an area that generally consists of single-family housing, multi-family housing, schools and churches. The site is currently zoned T-4 (General Urban) and is designated by the General Plan as 4B – Southern Neighborhoods. The site is vacant / undeveloped and is generally void of vegetation except for grass/weeds and scrub brush. Land uses and zoning designations of adjacent parcels surrounding the site are as follows:

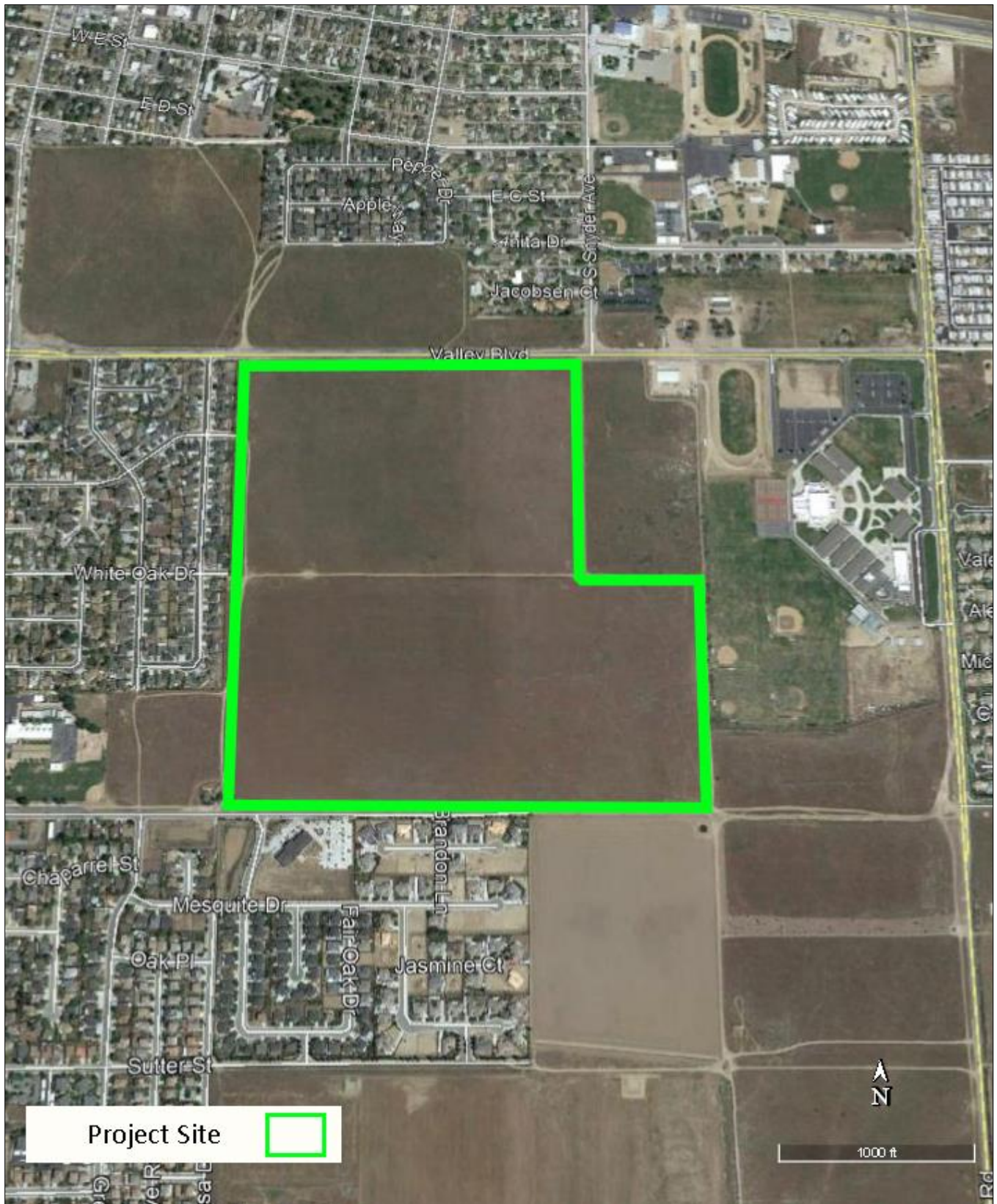
Surrounding Land Use and Zoning

Location	Existing Land Use	Current Zoning Classification
North	Vacant and residential	T-4 (General Urban)
South	Vacant, residential, church	R-1-8 (Low Density Single Family Residential) and T-4
West	Residential	R-1-8 (Low Density Single Family Residential)
East	High School	RSP (Recreation, School, Public Use)

Figure 2-1
Regional Location Map



**Figure 2-2
Site Aerial Map**



2.2 Project Description

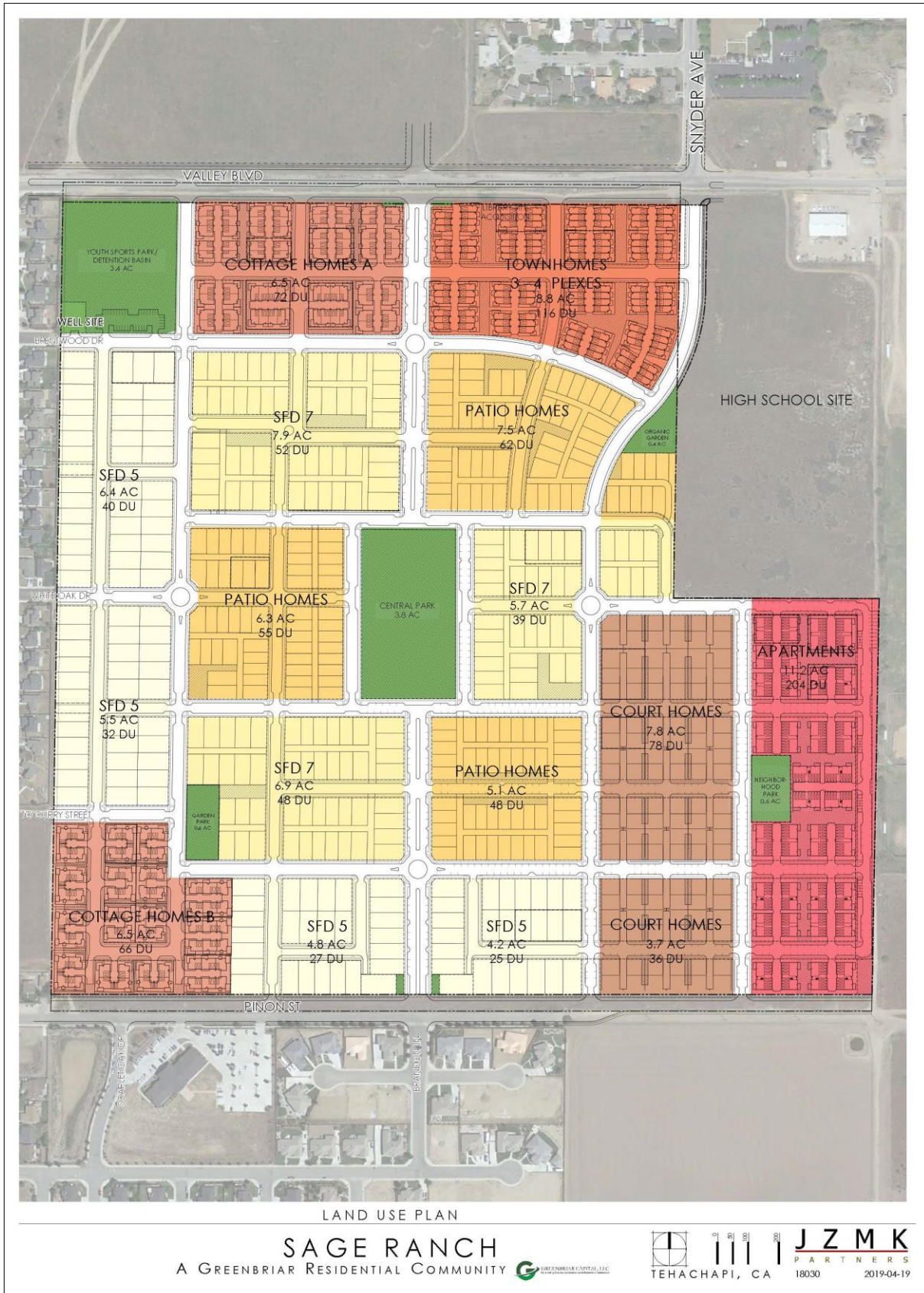
The Project Applicant is proposing to subdivide and develop approximately 138-acres of T-4 zoned land into a residential community with a mix of single-family and multi-family housing units. The proposal features eight different types of housing products for a total of 1,000 residential units at buildout. The eight different types of housing features detached products (52%) and attached products (48%). A brief description of housing types is shown in Table 2-1 and the proposed Site Layout Plan is shown in Figure 2-3.

Table 2-1
Summary of Proposed Housing Types

Housing Type	Total Acreage	Number of Units
<u>SFD-5: Single-Family Detached</u> (5,000 – 5,500 sq. ft. parcels). Four blocks of this housing type will be located on the outer edge of the Project along the eastern and southern edge of the Project.	20.9	124
<u>SFD-7: Single-Family Detached</u> (4,200 sq. ft. parcels). Two blocks of this housing type will be located within the interior of the Project around the central park.	20.5	139
<u>Patio Homes: Multi-Family Detached</u> . Three locations of this housing type will be near the interior of the Project around the central park, interspersed with the SFD-7 housing.	18.9	165
<u>Court Homes: Multi-Family Detached</u> . Two locations of this housing type will be near the southeastern area of the Project.	11.5	114
<u>Cottage A&B: Multi-Family Attached</u> . Cottage A will be located along the northern edge and Cottage B along at southwestern corner of the Project.	13	A – 72 B – 66
<u>Townhomes: Multi-Family Attached</u> . Townhomes will be located at the northeastern corner of the Project.	8.8	116
<u>Apartments: Multi-Family Attached</u> . Apartments will be located in the southeastern corner of the Project.	11.2	204
Total	104.8*	1,000

**The balance of the total Project acreage consists of parks/open space, roadways, right-of-way and related land.*

**Figure 2-3
Proposed Site Layout Plan**



Pedestrian Sheds and Civic Space

The Project includes a total of five pedestrian sheds, all civic space, within the Project. A variety of park space is being proposed as follows:

- 3.8 acre Central Park
- 3.4 acre Youth Sports Park / Detention Basin
- 0.6 acre Garden Park
- 0.6 acre Neighborhood Park
- 0.4 acre Organic Garden
- Various pocket parks throughout

See Figure 2-4 Parks and Pedestrian Shed Plan.

Site Circulation and Access

The overall layout of the proposed Project is block form, with shortened roadway lengths in order to create a walkable urban environment. The site has been designed with 12 points of ingress and egress. Five of these points connect at Valley Boulevard along the northern edge of the Project; 3 access points on the western edge; and 4 access points along the southern edge. The Project will be responsible for construction of internal roadways as well as for potential improvements to surrounding roadways to accommodate the Project.

See Figure 2-5 Circulation Plan.

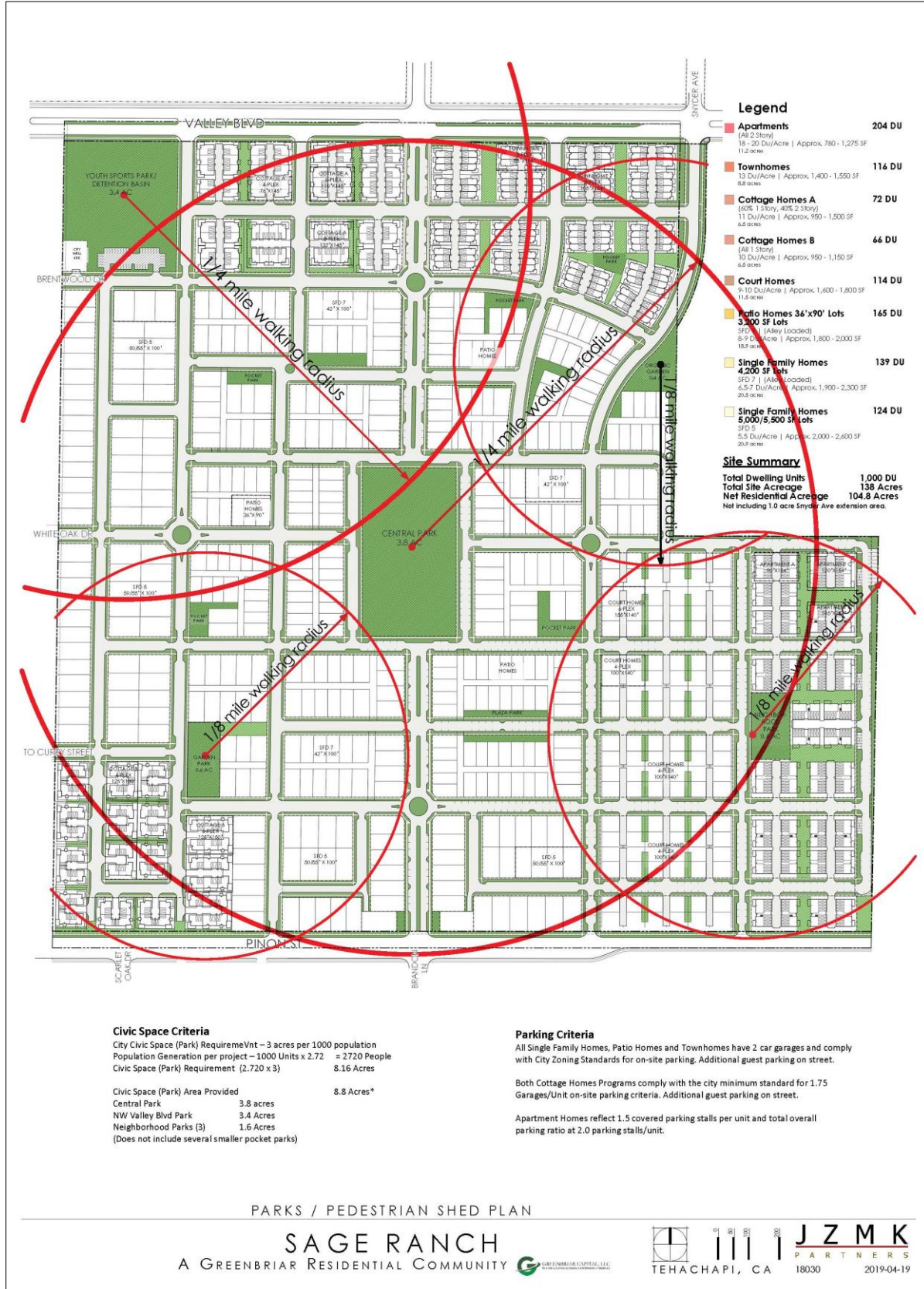
Infrastructure

The Project will require connection to various City-operated systems. These include sewer, water and storm drain facilities. The Project will be responsible for construction of connection points to the City's existing infrastructure. The Project also includes improvements and landscaping along the frontage roads and within the site itself.

Phasing / Construction Schedule

The Project is proposed to be built out in phases as shown in Figure 2-6 Phasing Plan. Although the exact timing of construction and buildout will be determined by the City, it is anticipated that the Project would be built out over a seven year period with approximately 143 units per year on average.

Figure 2-4
Parks and Pedestrian Shed Plan



**Figure 2-5
Circulation Plan**

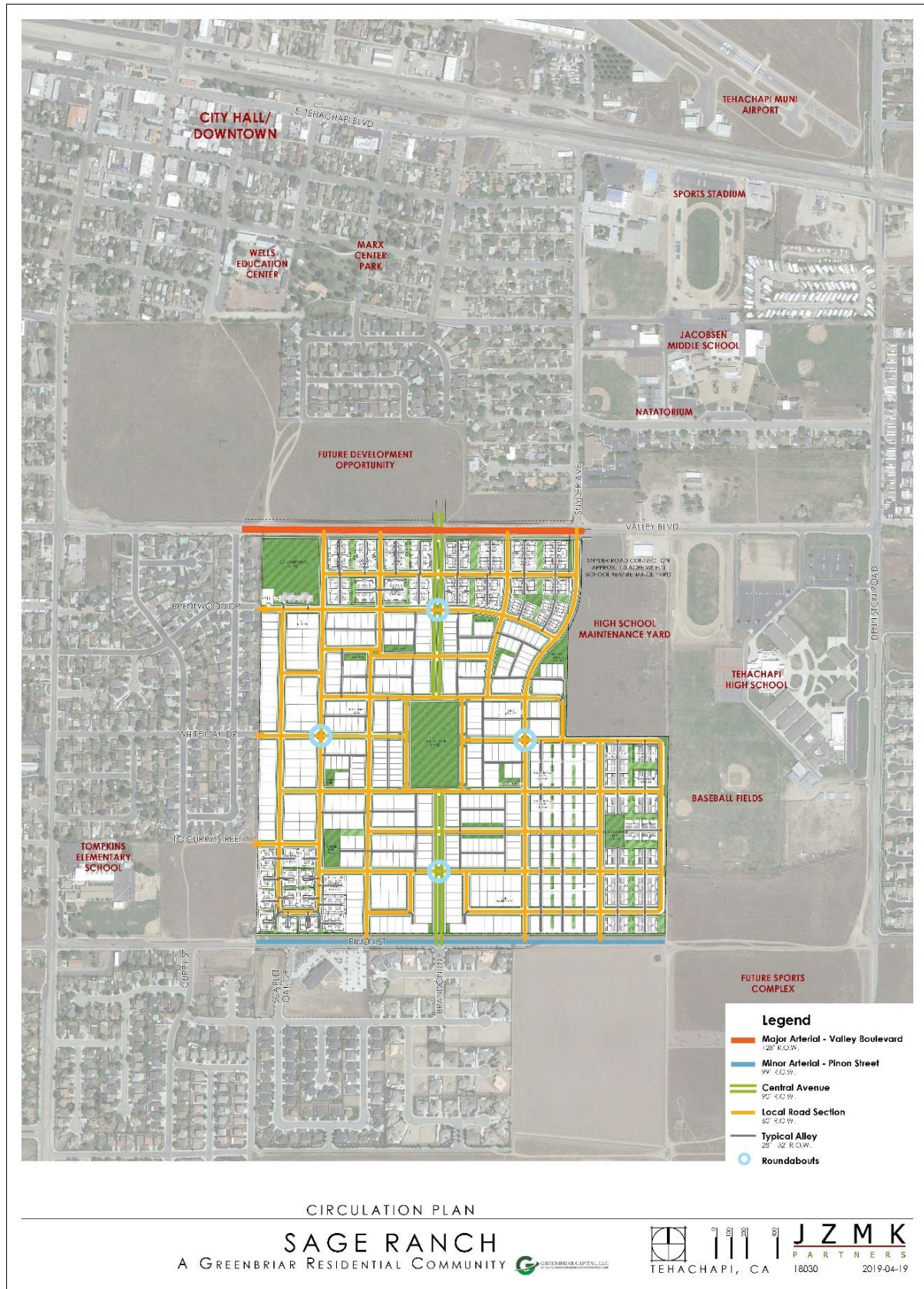
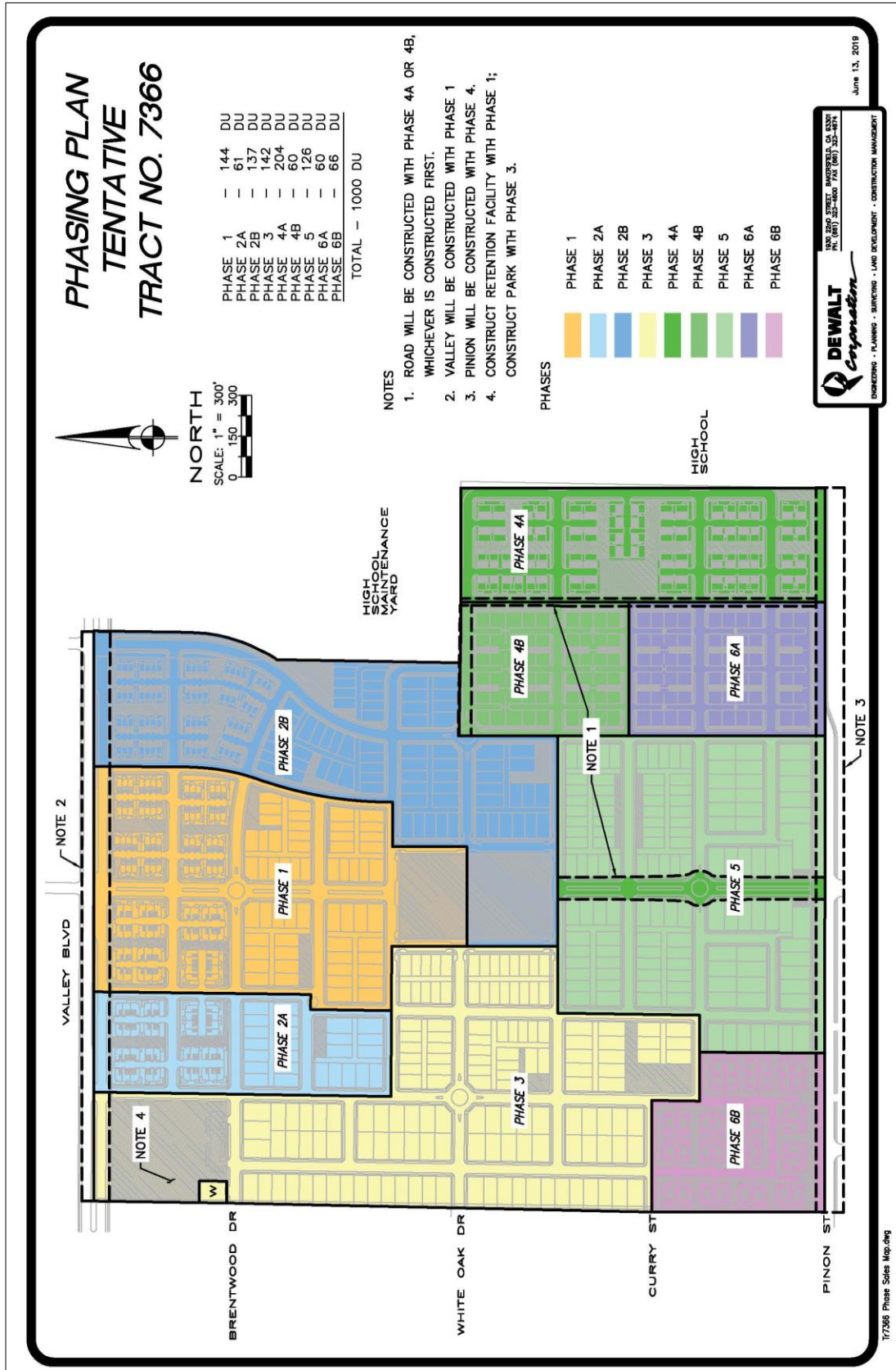


Figure 2-6
Phasing Plan



2.3 Entitlement Procedures

The Project is proposed to be processed as a Planned Development Zone which is found in Chapter 3.30.160 of the City's Zoning Code. The Planned Development Zone is a mechanism that allows for a flexible regulatory procedure by which the General Plan and Zoning Code may be accomplished and is appropriate for comprehensive site planning of large parcels. Various approvals by the City (Planning Commission and City Council) are required for the Final Master Development Plan which will include the following components:

- Final/complete site plan
- Proposed floor plans / elevations
- Tentative tract map
- CEQA documents and technical studies
- Associated studies, maps and reports

Upon approval of the Final Master Development Plan by the City Council, the Applicant is required to submit Precise Development Plans for each phase or increment of construction and must provide a level of detail satisfactory to the City Engineer. The Planning Commission considers each Precise Development Plan as they are submitted.

2.4 Project Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the City of Tehachapi's Project objectives:

- To provide a variety of housing opportunities with a range of densities, styles, sizes and values that will be designed to satisfy existing and future demand for quality housing in the area.
- To provide a sense of community and walkability within the development through the use of street patterns, parks/open space areas, landscaping and other project amenities.
- To provide a residential development that is compatible with surrounding land uses and is near major services.
- To provide a residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

2.5 Other Required Approvals

City

The City of Tehachapi will be the Lead Agency for the proposed Project, pursuant to the California Environmental Quality Act (CEQA). The Project will require the following approvals from the City of Tehachapi:

- Certification of the Project EIR
- Approval of the Final Master Development Plan
- Grading / Building Permits

Other Public Agencies

The Project will require various permits and/or entitlements from regulatory agencies. These may include, but not be limited to the following:

- Eastern Kern Air Pollution Control District – approval of construction and/or operational air quality permits
- Storm Water Pollution Prevention Plan
- Regional Water Quality Control Board
- Kern County Fire Department

Chapter 3

ENVIRONMENTAL SETTING, IMPACTS & MITIGATION

3.3 Air Quality

This section of the DEIR evaluates the potential air quality impacts associated with the implementation of the proposed Project. This air quality assessment has been prepared pursuant to the Eastern Kern Air Pollution Control District's (EKAPCD) Rule 210.1 New and Modified Stationary Source Review (NSR)¹, EKAPCD's Guidelines for Implementation of the California Environmental Quality Act of 1970, EKAPCD Policy, "Addendum to CEQA Guidelines Addressing GHG Emission Impacts for Stationary Source Projects When Serving As Lead CEQA Agency"², the California Environmental Quality Act (CEQA) (Public Resources Code 21000 to 21177) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387). The information and analysis presented in this Section are based on the Air Quality Impact Analysis (AQIA) prepared for this Project by Insight Environmental Consultants. The full AQIA can be reviewed in Appendix B.

Environmental and Regulatory Setting

Mojave Desert Air Basin

The proposed Project is located in Kern County within the westernmost portion of the Mojave Desert Air Basin (MDAB), where the Eastern Kern Air Pollution Control District (EKAPCD) acts as the regulatory agency for air pollution control and is the local agency empowered to regulate air pollutant emissions within the proposed Project area.

The MDAB includes the desert portions of Los Angeles and San Bernardino Counties, the eastern portion of Kern County and the northeastern desert portion of Riverside County. Key topographical features that define the MDAB are the Tehachapi Mountains to the west, the San Gabriel Mountains to the south, and the southern end of the Sierra Nevada Mountains to the north. These features surround the desert floor with peak elevations from between 7,000 and 10,000 feet and effectively remove most of the precipitable water from the atmosphere before it reaches the region.³

Under the provisions of the U.S. Clean Air Act, the Kern County portion of the MDAB has been classified as non-attainment, attainment, unclassified/attainment or unclassified under the

¹ Eastern Kern Air Pollution Control District (EKAPCD). 2000. Rule 210.1 "New and Modified Stationary Source Review (NSR). Revised May 4, 2000.

² Eastern Kern Air Pollution Control District (EKAPCD). 2012. District Policy, "Addendum to CEQA Guidelines Addressing GHG Emission Impacts from Stationary Source Projects When Serving As Lead CEQA Agency." March 8, 2012.

³ City of Tehachapi General Plan Draft EIR. Page 4.3-1.

established National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for various criteria pollutants. Table 3.3-1 provides the EKAPCD's designation and classification based on the various criteria pollutants under both NAAQS and CAAQS. Table 3.3-2 provides the NAAQS and CAAQS.

**Table 3.3-1
EKAPCD Attainment Status**

Pollutant	Designation/Classification			
	National Ambient Air Quality Standards (NAAQS)			State Ambient Air Quality Standards
	EKAPCD	Kern River / Cummings Valley ^{1,2}	Indian Wells Valley ^{3,4,5}	
Ozone – 1 Hour	Attainment ^{6,7}	Part of EKAPCD Area	Part of EKAPCD Area	Nonattainment
Ozone – 8 Hour ⁸	Serious Nonattainment	Part of EKAPCD Area	Unclassifiable/Attainment	Nonattainment
PM10	Unclassifiable/Attainment	Serious Nonattainment	Attainment Maintenance	Nonattainment
PM2.5	Unclassifiable/Attainment	Part of EKAPCD Area	Part of EKAPCD Area	Unclassified
Carbon Monoxide	Unclassifiable/Attainment	Part of EKAPCD Area	Part of EKAPCD Area	Unclassified
Nitrogen Dioxide	Unclassified	Part of EKAPCD Area	Part of EKAPCD Area	Attainment
Sulfur Dioxide	Unclassified	Part of EKAPCD Area	Part of EKAPCD Area	Attainment
Lead Particulates	Unclassifiable/Attainment	Part of EKAPCD Area	Part of EKAPCD Area	Attainment

Source: Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 3.3.

Notes:

¹ Kern River Valley, Bear Valley, and Cummings Valley were previously included in the federally designated San Joaquin Valley PM10 Serious Nonattainment Area but were made a separate Nonattainment area in 2008.

² Kern River Valley, Bear Valley, and Cummings Valley are included in EKAPCD for all NAAQS other than PM10.

³ Indian Wells Valley is a separate planning area from the rest of EKAPCD for PM10 NAAQS.

⁴ Indian Wells Valley is a separate area for the 1997 and 2008 8-hour ozone NAAQS (0.08 & 0.075 ppm).

⁵ Indian Wells Valley is included in EKAPCD for all NAAQS other than PM10 and 8-hour ozone.

⁶ 1-hour ozone NAAQS was revoked effective June 15, 2004.

⁷ EKAPCD was in attainment for 1-hour ozone NAAQS at time of revocation; the proposed Attainment Maintenance designation's effective date.

⁸ Attainment for 1997 8-hour Ozone NAAQS (0.08 ppm), Nonattainment/Marginal for 2008 NAAQS (0.075 ppm), and Nonattainment State 8-hour standard (0.070 ppm)

**Table 3.3-2
Federal & California Standards**

Pollutant	Averaging Time	NAAQS	CAAQS
		Concentration	
O ₃	8-Hour	0.070 ppm (137 µg/m ³) ^c	0.070 ppm (137 µg/m ³)
	1-Hour	^a	0.09 ppm (180 µg/m ³)
CO	8-Hour	9 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)
	1-Hour	35 ppm (40 mg/m ³)	20 ppm (23 mg/m ³)
NO ₂	Annual Average	53 ppb (100 µg/m ³)	0.030 ppm (56 µg/m ³)
	1-Hour	100 ppb (188.68 µg/m ³)	0.18 ppm (338 µg/m ³)
SO ₂	3-Hour	0.5 ppm (1,300 µg/m ³)	
	24 Hour	0.14 ppm (365 µg/m ³)	0.04 ppm (105 µg/m ³)
	1-Hour	75 ppb (196 µg/m ³)	0.25 ppm (655 µg/m ³)
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	^b	20 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³
	24-Hour	35 µg/m ³	
Sulfates	24-Hour		25 µg/m ³
Pb ^d	Rolling Three-Month Average	0.15 µg/m ³	
	30 Day Average		1.5 µg/m ³
H ₂ S	1-Hour		0.03 ppm (42 µg/m ³)
Vinyl Chloride (chloroethene)	24-Hour		0.010 ppm (26 µg/m ³)
Visibility Reducing particles	8 Hour (1000 to 1800 PST)		^e
ppm = parts per million ppb = parts per billion		mg/m ³ = milligrams per cubic meter	µg/m ³ = micrograms per cubic meter
<p><i>Source:</i> San Joaquin Valley Air Pollution Control District (SJVAPCD). 2016. "Flat Griddle – Hamburger & Steak" Spreadsheet. February 25, 2016 and California Air Resources Board (CARB). Background Emissions Data http://www.arb.ca.gov/homepage.htm</p> <p><i>Notes:</i> ^a 1-Hour O₃ standard revoked effective June 15, 2005. ^b Annual PM 10 standard revoked effective December 18, 2006. ^c EPA finalized the revised (2008) 8-hour O₃ standard of 0.075 ppm on March 27, 2008. The 1997 8-hour O₃ standard of 0.08 ppm has not been revoked. In the January 19, 2010 Federal Register, EPA proposed to revise the 2008 O₃ NAAQS of 0.075 ppm to a NAAQS in the range of 0.060 to 0.070 ppm. EPA expects to finalize the revised NAAQS, which will replace the 0.075 ppm NAAQS, by July 29,</p>			

2011.

^d On October 15, 2008, EPA strengthened the Pb standard.^e Statewide Visibility Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Climate

Climate of the Project area is a continentally modified Mediterranean type, characterized by cool, wet winters and hot, dry summers. Temperatures during the summer drop to the mid to lower 50s and rise to the upper 80s. In winter, the average high temperatures reach into the upper 50s, and the average low temperatures drop into the mid- 30s. The mean annual precipitation in Tehachapi, California is 12.87 inches, the bulk of which falls during the period November through March. Snowfall commonly occurs from December through March.

Meteorological data for various monitoring stations is maintained by the Western Regional Climate Center. Meteorological data for the Project site is expected to be similar to the data recorded at the Tehachapi, California monitoring station. Table 3.3-3 presents average precipitation data recorded at the Tehachapi, California monitoring station from August 1997 through June 2016 (the most recent data available).

**Table 3.3-3
Tehachapi, California (048826) Weather Data**

Period of Record Monthly Climate Summary for the Period 08/01/1997 to 06/8/2016													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Maximum Temp (F)	52.5	52.1	56.1	61.2	71.5	79.2	86.5	86.5	81.7	69.9	59.1	51.3	67.4
Average Minimum Temp (F)	31.8	31.4	33.8	36.3	51.7	51.5	58.2	55.3	50.7	42.2	36.5	30.5	41.9
Average Total Precip.(in.)	2.10	2.93	1.74	0.95	0.46	0.08	0.25	0.11	0.21	0.53	1.36	2.15	12.87
Average Snowfall (in.)	4.3	6.0	4.9	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.7	20.1
Average Snow Depth (in.)	No Data												
Source: Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 3-8.													
Notes:													
Percent of possible observations for period of record:													
Max. Temp.: 98.3% Min. Temp.: 98.3% Precipitation: 99.1% Snowfall: 98.3% Snow Depth: 95.3%													

Existing Air Quality

For the purposes of background data and this air quality assessment, this analysis relied on data collected in the last three years for the California Air Resources Board (CARB) monitoring stations that are located in the closest proximity to the proposed Project site. Table 3.3-4 provides the background concentrations for O₃, PM₁₀, PM_{2.5}, CO, NO₂, and H₂S as of 2018 and for Pb as of 2017. Information is provided for the Mojave – 923 Poole Street, Lancaster – 43301 Division Street, Trona – Athol and Telegraph, and Victorville – 14306 Park Avenue Monitoring Stations. No data is available for SO₂, Vinyl Chloride or other toxic air contaminants in the Mojave Desert Air Basin (MDAB).

Table 3.3-4
Existing Air Quality Monitoring Data in Project Area

Pollutant and CARB Monitoring Station Location	Maximum Concentration			Days Exceeding Standard		
	2016	2017	2018	2016	2017	2018
O₃ – 1-hour CAAQS (0.09 ppm)						
Mojave – 923 Poole Street	0.104	0.097	0.111	2	1	8
Lancaster – 43301 Division Street	0.108	0.109	0.125	3	10	5
O₃ – 8-hour CAAQS (0.07 ppm)						
Mojave – 923 Poole St.	0.093	0.086	0.095	60	37	56
Lancaster – 43301 Division Street	0.093	0.085	0.094	52	35	53
O₃ – 8-hour NAAQS (0.07 ppm)						
Mojave – 923 Poole St.	0.084	0.093	0.085	31	52	35
Lancaster – 43301 Division Street	0.090	0.087	0.104	60	43	48
PM₁₀ – 24-hour CAAQS (50 µg/m³)						
Mojave – 923 Poole St.	130.30	85.7	86.5	18	10	19
Lancaster – 43301 Division Street	*	*	*	*	*	*
PM₁₀ – 24-hour NAAQS (150 µg/m³)						
Mojave – 923 Poole St.	139.20	93.4	93.1	0	0	0
Lancaster – 43301 Division Street	145.00	82.4	89.3	0	0	0
PM_{2.5} - 24-hour NAAQS (35 µg/m³)						
Mojave – 923 Poole St.	25.70	26.9	39.0	0	0	2
Lancaster – 43301 Division Street	64.80	26.6	40.4	2	0	1
CO - 8-Hour CAAQS & NAAQS (9.0 ppm)						
No data collected	*	*	*	*	*	*
NO₂ - 1-Hour CAAQS (0.18 ppm)						
Lancaster – 43301 Division Street	0.048	0.046	0.047	0	0	0
Victorville – 14306 Park Avenue	0.097	0.057	0.051	0	0	0
NO₂ - 1-Hour NAAQS (0.10 ppm)						
Lancaster – 43301 Division Street	0.049	0.047	0.048	0	0	0
Victorville – 14306 Park Avenue	0.010	0.057	0.051	0	0	0
SO₂ – 24-hour Concentration - CAAQS (0.04 ppm) & NAAQS (0.14 ppm)						

No data collected	*	*	*	*	*	*
H2S – 1-Hour CAAQS (0.03ppm)						
Trona - Athol and Telegraph	0.083	0.164	0.104	48	63	120
	2015	2016	2017	2015	2016	2017
Pb - Maximum 30-Day Concentration CAAQS (1500 ng/m3)						
Bakersfield – 5558 California Avenue	9.50	19.80	12.60	*	*	*
<i>Source:</i> Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 3.5. <i>Notes:</i> ppm= parts per million * There was insufficient (or no) data available to determine the value.						

The following is a description of criteria air pollutants, typical sources and health effects and the recently documented pollutant levels in the Project vicinity.

Ozone (O₃)

The MDAB has high concentrations of O₃ and these high levels are known to cause eye irritation and impair respiratory functions. High levels of O₃ can also affect plants and materials. Grapes, lettuce, spinach and many types of garden flowers and shrubs are particularly vulnerable to O₃ damage. O₃ is not directly emitted into the atmosphere; it is a secondary pollutant produced from a photochemical interaction between hydrocarbons and nitrogen oxides (NO_x). One to three hours of strong sunlight in a stable atmosphere creates O₃. The “O₃ season” therefore typically spans from April through October. O₃ is a regional pollutant; wind transports and diffuses the precursors while activating the photochemical reaction process. The data presented in Table 3-3.4 shows that the Mojave and Lancaster area monitoring stations exceeded the 1-hour average ambient O₃ CAAQS and the 8-hour average ambient O₃ NAAQS and CAAQS between 2016 through 2018.

Suspended Particulate Matter (PM₁₀ and PM_{2.5})

Both NAAQS and CAAQS now apply to particulates under 10 microns (PM₁₀). Since the smaller diameter fraction of total suspended particulates are documented to represent the greatest health hazard, EPA has established NAAQS for particulates under 2.5 microns (PM_{2.5}). The Project area is classified as unclassifiable/attainment for PM₁₀ and PM_{2.5} for NAAQS.

Dust and fumes from industrial and agricultural operations generate particulate matter. Natural activities, such as wind-raised dust, fires and ocean spray, also increase the level of particulates in the atmosphere. The largest source of PM₁₀ and PM_{2.5} in Kern County is vehicle movement over paved and unpaved roads from demolition and construction activities and farming operations. PM₁₀ and PM_{2.5} are considered regional pollutants with elevated levels typically occurring over a wide geographic area. Concentrations tend to be highest in the winter, during

periods of high atmospheric stability and low wind speed. Very small particulates may contain absorbed gases that produce injury to the respiratory tract. Particulates of aerosol size suspended in the air can both scatter and absorb sunlight, producing haze and reducing visibility. They can also damage a wide range of materials. Table 3-3.4 shows that PM_{10} levels exceeded the CAAQS and $PM_{2.5}$ exceeded the NAAQS in 2016 and 2018. Similar levels can be expected to occur in the vicinity of the Project site.

Carbon Monoxide (CO)

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. Wind speed and atmospheric mixing also influence CO concentrations; however, under inversion conditions prevalent in the San Joaquin valley, CO concentrations may be more uniformly distributed over a broad area.

Internal combustion engines, principally in vehicles, produce CO due to incomplete fuel combustion. Various industrial processes also produce CO emissions through incomplete combustion. Gasoline-powered motor vehicles are typically the major source of this contaminant. CO does not irritate the respiratory tract, but passes through the lungs directly into the blood stream, and by interfering with the transfer of fresh oxygen to the blood, deprives sensitive tissues of oxygen, thereby aggravate cardiovascular disease, causing fatigue, headaches, and dizziness. CO is not known to have adverse effects on vegetation, visibility or materials. Table 3-3.4 reports insufficient data for the CO monitoring at any monitoring stations during the three-year period from 2016 through 2018.

Nitrogen Dioxide (NO₂) and Hydrocarbons

Eastern Kern County has been designated as an unclassified area for the NAAQS for NO₂. NO₂ is the "whiskey brown" colored gas readily visible during periods of heavy air pollution. Mobile sources account for nearly all of the county's NO_x emissions, most of which is emitted as NO₂. Combustion in motor vehicle engines, power plants, refineries and other industrial operations are the primary sources in the air basin. Railroads and aircraft are other potentially significant sources of combustion air contaminants. Oxides of nitrogen are direct participants in photochemical smog reactions. The emitted compound, nitric oxide, combines with oxygen in the atmosphere in the presence of hydrocarbons and sunlight to form NO₂ and O₃. NO₂, the most significant of these pollutants, can color the atmosphere at concentrations as low as 0.5 ppm on days of 10-mile visibility. NO_x is an important air pollutant in the region because it is a primary receptor of ultraviolet light, which initiates the reactions producing photochemical smog. It also reacts in the air to form nitrate particulates.

Motor vehicles are the major source of reactive hydrocarbons in the basin. Other sources include evaporation of organic solvents and petroleum production and refining operations. Certain hydrocarbons can damage plants by inhibiting growth and by causing flowers and leaves to fall.

Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions, which produce photochemical oxidants. Table 3-3.4 shows that the NO₂ NAAQS and CAAQS were not exceeded over the three-year period of 2016 through 2018. Hydrocarbons are not currently monitored.

Sulfur Dioxide (SO₂)

Eastern Kern County has been designated as an unclassified area for the NAAQS for SO₂. SO₂ is the primary combustion product of sulfur, or sulfur containing fuels. Fuel combustion is the major source of this pollutant, while chemical plants, sulfur recovery plants, and metal processing facilities are minor contributors. Gaseous fuels (natural gas, propane, etc.) typically have lower percentages of sulfur containing compounds than liquid fuels such as diesel or crude oil. SO₂ levels are generally higher in the winter months. Decreasing levels of SO₂ in the atmosphere reflect the use of natural gas in power plants and boilers.

At high concentrations, SO₂ irritates the upper respiratory tract. At lower concentrations, when respirated in combination with particulates, SO₂ can result in greater harm by injuring lung tissues. Sulfur oxides (SO_x), in combination with moisture and oxygen, results in the formation of sulfuric acid, which can yellow the leaves of plants, dissolve marble, and oxidize iron and steel. SO_x can also react to produce sulfates that reduce visibility and sunlight. Table 3-3.4 shows no data has been reported over the three-year period.

Lead (Pb) and Suspended Sulfate

Ambient Pb levels have dropped dramatically due to the increase in the percentage of motor vehicles that run exclusively on unleaded fuel. Ambient Pb levels in Bakersfield (the closest monitoring station to the Project) are well below the ambient standard and are expected to continue to decline; the data reported in Table 3-3.4 only shows the highest concentration as the number of days exceeding standards are not reported. Suspended sulfate levels have stabilized to the point where no excesses of the State standard are expected in any given year.

Thresholds of Significance

To determine whether a proposed Project could create a potential CEQA impact, local, state and federal agencies have developed various means by which a project's impacts may be measured and evaluated. Such means can generally be categorized as follows:

- Thresholds of significance adopted by air quality agencies to guide lead agencies in their evaluation of air quality impacts under the CEQA.

- Regulations established by air districts, CARB and EPA for the evaluation of stationary sources when applying for Authorities to Construct, Permits to Operate and other permit program requirements (e.g., New Source Review).
- Thresholds utilized to determine if a project would cause or contribute significantly to violations of the ambient air quality standards or other concentration-based limits.
- Regulations applied in areas where severe air quality problems exist.

Summary tables of these emission-based and concentration-based thresholds of significance for each pollutant are provided below along with a discussion of their applicability.

Thresholds Adopted for the Evaluation of Air Quality Impacts Under CEQA

In order to maintain consistency with CEQA, the EKAPCD adopted guidelines to assist applicants in complying with the various requirements. According to the EKAPCD's Guidelines⁴, a proposed Project does not have significant air quality impacts on the environment, if operation of the project will:

- Emit (from all projects sources subject to EKAPCD Rule 201) less than offsets trigger levels set forth in Subsection III.B.3 of EKAPCD's Rule 210.1 (New and Modified Source Review Rule);
- Emit less than 137 pounds per day (25 tons per year) of NO_x or Reactive Organic Compounds from motor vehicle trips (indirect sources only);
- Not cause or contribute to an exceedance of any California or National Ambient Air Quality Standard;
- Not exceed the District health risk public notification thresholds adopted by the EKAPCD Board; or
- Be consistent with adopted Federal and State Air Quality Attainment Plans.

The guideline thresholds are designed to implement the general criteria for air quality emissions as required in the State CEQA Guidelines, Appendix G, Paragraph III and CEQA (State of California CEQA Guidelines, §15064.7). As such, EKAPCD thresholds provide a means by which

⁴ Eastern Kern Air Pollution Control District (EKAPCD). 1996. Rule 208.2 "Criteria for Finding of No Significant Environmental Impact (California Environmental Quality Act). Revised May 2, 1996.

the general standards set forth by Appendix G may be used to quantitatively measure the air quality impacts of a specific project. According to the EKAPCD Guidelines and Thresholds of Significance for the City of Tehachapi, a proposed project would result in a significant impact if it exceeds any of the thresholds are presented in Table 3.3-5.

**Table 3.3-5
EKAPCD CEQA Thresholds of Significance**

Criteria Pollutant	Significance Level	
	Daily (Indirect Mobile Only)	Annual
NO _x	137 lbs/day	25 tons/yr
ROG	137 lbs/day	25 tons/yr
SO _x	-	27 tons/yr
PM ₁₀	-	15 tons/yr
PM _{2.5}	-	15 tons/yr

Thresholds for Ambient Air Quality Impacts

State CEQA Guidelines – Appendix G (Environmental Checklist) states that a project that would “*violate any air quality standard or contribute substantially to an existing or projected air quality violation*” would be considered to create significant impacts on air quality. Therefore, an AQIA should determine whether the emissions from a project would cause or contribute significantly to violations of the NAAQS or CAAQS (presented above in Table 3.3-1) when added to existing ambient concentrations.

The EPA has established the federal Prevention of Significant Deterioration (PSD) program to determine what comprises “significant impact levels” (SIL) to NAAQS attainment areas. A project’s impacts are considered less than significant if emissions are below PSD SIL for a particular pollutant. When a SIL is exceeded, an additional “increment analysis” is required. As the Project would not include modification to the stationary source under NSR, it would not be subject to either PSD or NSR review. The PSD SIL thresholds are used with ambient air quality modeling for a CEQA project to address whether the Project would “*violate any air quality standard or contribute substantially to an existing or projected air quality violation.*” Ambient air quality emissions estimates below the PSD SIL thresholds would result in less than significant ambient air quality impacts on both a project and cumulative CEQA impact analysis. PSD SILs and increments are more stringent than the CAAQS or NAAQS and represent the most stringent thresholds of significance.

Thresholds for Hazardous Air Pollutants

The EKAPCD's Guidelines state, that a project result in a significant impact if it exceeds that District health risk notification thresholds presented in Table 3.3-6. Table 3.3-6 presents the thresholds of significance uses with TACs when evaluating HAPs.

**Table 3.3-6
Measures of Significance – TACs**

Agency	Level	Description
Significance Thresholds Adopted for the Evaluation of Impacts Under CEQA		
EKAPCD	Carcinogens	Maximally Exposed Individual risk equals or exceeds 1 in one million.
	Non-Carcinogens	Acute: Hazard Index equals or exceeds 0.2 for the Maximally Exposed Individual.
		Chronic: Hazard Index equals or exceeds 0.2 for the Maximally Exposed Individual.
Source: Eastern Kern Air Pollution Control District (EKAPCD). 1996. Rule 208.2 "Criteria for Finding of No Significant Environmental Impact (California Environmental Quality Act). Revised May 2, 1996.		

Impacts and Mitigation Measures

Impact 3.2-1: *Would the project emit (from all projects sources subject to EKAPCD Rule 201) more than offsets trigger levels set forth in Subsection III.B.3 of EKAPCD's Rule 210.1 (New and Modified Source Review Rule); and emit more than 137 pounds per day (25 tons per year) of NO_x or Reactive Organic Compounds from motor vehicle trips (indirect sources only)?*

Less Than Significant Impact. The AQIA was prepared pursuant to EKAPCD's *Guidelines for Implementation of the California Environmental Quality Act, July 1, 1999 Revision*. The guidelines do not necessarily require a quantification of construction emissions for all projects. Construction emissions quantification is typically required only at the request of the lead agency. The EKAPCD generally assumes that implementation of any construction-related mitigation measures will result in construction emissions impacts that are *less than significant*.

Project emissions were estimated separately for each emission source. EMFAC model version and California Emissions Estimator Model (CalEEMod) were used to estimate emissions for both short-term, construction-related, sources as well as long-term, operations-related, sources.

Project emissions were estimated for the following development stages:

- Short-term (construction and demolition) – Construction emissions of the proposed Project were estimated in CalEEMod using applicant assumptions for construction

schedule for the development of the Project in seven phases. There is no demolition associated with the Project as it is being developed on open land.

- Long-term (operational) – Long-term emissions were also estimated using CalEEMod for operations of a residential community with a mix of single family and multi-family housing units using both default and non-default input.

Short-Term Emissions

In order to estimate emissions associated with the proposed Project, several changes were made to the standard defaults provided in CalEEMod. The CalEEMod standard defaults were applied for the emissions estimates except for the following:

- Land use lot acreage and square footage was adjusted to match the Project description;
- Demolition construction phase was removed as the Project Location is open land;
- Water exposed area two times per day⁵;
- The construction schedule was adjusted to match the anticipated schedule for the Project; and,
- Reduce vehicle speed to less than 15 miles per hour per EKAPCD Rule 402.

Short-term emissions are primarily from the construction phase of a project and are recognized to be short in duration and without lasting impacts on air quality.

Table 3.3-7 presents the Project's short-term emissions based on the anticipated construction period.

**Table 3.3-7
Short-Term Project Emissions**

Emissions Source	Pollutant (tons/year) ¹					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Unmitigated						
2020	3.52	3.09	2.60	0.01	0.42	0.25
2021	3.48	2.82	2.52	0.01	0.40	0.23
2022	3.45	2.48	2.43	0.01	0.38	0.21
2023	3.20	2.23	2.39	0.01	0.36	0.19
2024	3.41	2.11	2.37	0.01	0.36	0.18

⁵ Per EKAPCD's "Suggested Air Pollutant Mitigation Measures for Construction Sites for Eastern APCD".

Emissions Source	Pollutant (tons/year) ¹					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2025	3.40	1.94	2.32	0.01	0.34	0.17
2026	3.39	1.93	2.30	0.01	0.34	0.17
Maximum Annual Emission	3.52	3.09	2.60	0.01	0.42	0.25
Mitigated*						
2020	3.52	3.09	2.60	0.01	0.33	0.21
2021	3.48	2.82	2.52	0.01	0.30	0.18
2022	3.45	2.48	2.43	0.01	0.28	0.16
2023	3.20	2.23	2.39	0.01	0.26	0.15
2024	3.41	2.11	2.37	0.01	0.25	0.14
2025	3.40	1.94	2.32	0.01	0.24	0.13
2026	3.39	1.93	2.30	0.01	0.24	0.13
Maximum Annual Emission	3.52	3.09	2.60	0.01	0.33	0.21
EKAPCD Threshold	25	25	NA	27	15	15
Is Threshold Exceeded For a Single Year After Mitigation?	NO	NO	NO	NO	NO	NO
<p><i>Source:</i> Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 4.4.</p> <p><i>Notes:</i> 1) Emissions equaling 0.00 could represent emissions <0.005.</p> <p>2) The EKAPCD has no established threshold.</p> <p>*It should be noted that the CalEEMod program recognizes water exposed areas 3 times per day and the reduction in vehicular speed to 15 miles per hour as mitigation, even though those measures are required under EKAPCD .</p>						

As calculated with CalEEMod using the default equipment listing, the estimated short-term emissions would *not exceed* EKAPCD significance threshold levels and would therefore be *less than significant*.

Long-Term Operational Emissions

Long-term emissions are caused by operational mobile, area and stationary sources. Long-term emissions would consist of fugitive dust emissions and exhaust emissions, as further described below.

Fugitive Dust Emissions

Operation of the proposed Project site at full build-out is not expected to present a substantial source of fugitive dust (PM₁₀) emissions. The main source of PM₁₀ emissions would be from vehicular traffic associated with the proposed Project site.

PM₁₀ generated as a part of fugitive dust emissions, as noted by the regulatory agencies, pose a potentially serious health hazard, alone or in combination with other pollutants. Control measures required and enforced by the EKAPCD under Rule 402 will assist in minimizing these emissions to a less than significant level.

The Project would comply with applicable EKAPCD Rules and Regulations and the local zoning codes required in this analysis to reduce PM₁₀ emissions even further to ensure that the Project's emissions remain at a "less than significant" level.

Exhaust Emissions

Project-related transportation activities from employees, customers and deliveries would generate mobile source ROG, NO_x, SO_x, CO, PM₁₀ and PM_{2.5} exhaust emissions. Exhaust emissions would vary substantially from day to day but would average out over the course of an operational year. The variables factored into estimating total Project emissions include: level of activity, site characteristics, weather conditions.

Projected Emissions

The proposed Project is expected to have long-term air quality impacts as shown in Table 3.3-8. Emission calculations are available in Appendix B. The following mitigation measures were selected in CalEEMod per the Project details:

- Improve Walkability Design;
- Improve Destination Accessibility;
- Improve Pedestrian Network;
- 3% Electric Landscape Equipment;
- On-site Renewable Energy (installation of solar panels, per the 2019 California Building Code)

**Table 3.3-8
Operational Emissions**

Emissions Source	Pollutant (tons/year) ¹					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
<i>Unmitigated</i>						
Phase 1 (Operational Year 2021)	1.52	1.56	5.42	0.02	1.33	0.38
Phase 2 (Operational Year 2022)	1.49	1.45	5.07	0.02	1.33	0.37
Phase 3 (Operational Year 2023)	1.46	1.22	4.75	0.01	1.32	0.37
Phase 4 (Operational Year 2024)	1.44	1.15	4.50	0.01	1.32	0.37
Phase 5 (Operational Year 2025)	1.43	1.10	4.27	0.01	1.32	0.37
Phase 6 (Operational Year 2026)	1.41	1.05	4.07	0.01	1.32	0.37
Phase 7 (Operational Year 2027)	1.40	1.01	3.90	0.01	1.32	0.37
Total	10.16	8.54	31.98	0.10	9.26	2.61
<i>Mitigated*</i>						

Emissions Source	Pollutant (tons/year) ¹					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1 (Operational Year 2021)	1.52	1.51	5.19	0.01	1.24	0.35
Phase 2 (Operational Year 2022)	1.49	1.40	4.85	0.01	1.24	0.35
Phase 3 (Operational Year 2023)	1.46	1.18	4.54	0.01	1.23	0.35
Phase 4 (Operational Year 2024)	1.44	1.12	4.31	0.01	1.23	0.35
Phase 5 (Operational Year 2025)	1.42	1.07	4.09	0.01	1.23	0.35
Phase 6 (Operational Year 2026)	1.40	1.02	3.90	0.01	1.23	0.35
Phase 7 (Operational Year 2027)	1.39	0.98	3.74	0.01	1.23	0.35
Total	10.11	8.27	30.62	0.09	8.63	2.44
EKAPCD Threshold	25	25	NA	27	15	15
Is Threshold Exceeded After Mitigation?	NO	NO	NO	NO	NO	NO
<i>Source:</i> Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 4.5. <i>Notes:</i> 1) Emissions equaling 0.00 could represent emissions <0.005. 2) The EKAPCD has no established threshold.						

Table 3.3-9
(Indirect Mobile Only) Emissions

Emissions Source	Pollutant (lbs/day)	
	ROG	NO _x
Mitigated Emissions		
Phase 1 (Operational Year 2021)	1.96	7.46
Phase 2 (Operational Year 2022)	1.80	6.88
Phase 3 (Operational Year 2023)	1.64	5.68
Phase 4 (Operational Year 2024)	1.53	5.33
Phase 5 (Operational Year 2025)	1.44	5.06
Phase 6 (Operational Year 2026)	1.35	4.79
Phase 7 (Operational Year 2027)	1.27	4.56
Total	10.98	39.75
EKAPCD Threshold	137	137
Is Threshold Exceeded After Mitigation?	NO	NO
<i>Source:</i> Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 4.6.		

As shown in Table 3.3-8 and -9, operations-related emissions, as calculated by CalEEMod (See Appendix B), would be less than the EKAPCD significant threshold levels. Therefore, the proposed Project would have *a less than significant long-term air quality impact*.

Potential Impacts on Sensitive Receptors

Sensitive receptors are defined as locations where young children, chronically ill individuals, the elderly or people who are more sensitive than the general population reside, such as schools,

hospitals, nursing homes and daycare centers. The Project is surrounded by a high school to the east and residential to the north, south and west. There are seven known non-residential sensitive receptors within two miles of the Project site and are listed below in Table 3.3-10.

Table 3.3-10
Sensitive Receptors Located \leq 2 Miles from Project

Sensitive Receptor Name	Address	Distance from Project
Tehachapi High School	801 South Dennison Rd, Tehachapi, CA	0.25 miles E
Tompkins Elementary School	1120 S Curry St, Tehachapi, CA	0.40 miles SW
Jacobsen Middle School	711 Anita Dr, Tehachapi, CA	0.52 miles NE
Monroe High School	126 S Snyder Ave, Tehachapi, CA	0.57 miles NE
Tehachapi Senior Center	500 E F St, Tehachapi, CA	0.65 miles N
Guild of Tehachapi Hospital	101 W E St, Tehachapi, CA	0.78 miles NW
Adventist Health Tehachapi Valley	1100 Magellan Dr, Tehachapi, CA	1.98 miles NW

Based on the criteria pollutant analysis above and the potential visibility, health, and odor impacts analyzed below, the proposed Project is expected to have a *less than significant* impact on sensitive receptors.

Potential Impacts to Visibility to Nearby Class 1 Areas

Visibility impact analyses are intended for stationary sources of emissions which are subject to the PSD requirements in 40 CFR Part 60; they are not usually conducted for area sources. Because the Project's PM₁₀ emissions increase are predicted to be less than the PSD threshold levels, an impact at any Class 1 area or military/airspace operation within 100 kilometers of the Project (including Edwards Air Force Base, China Lake Naval Weapons Station and the entire R-2508 Airspace Complex, and Death Valley National Monument) is extremely unlikely. Therefore, based on the Project's predicted less-than significant PM₁₀ emissions, the proposed Project would be expected to have a *less than significant* impact to visibility at any Class 1 area or military/airspace operation.

Potential Impacts from Carbon Monoxide (CO) – Mobile Sources

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. CO concentrations are also influenced by wind speed and atmospheric mixing. CO concentrations may be more uniformly distributed when inversion conditions are prevalent in the valley. Under certain meteorological conditions, CO concentrations along a congested roadway or intersection may reach unhealthful levels for sensitive receptors, e.g. children, the elderly, hospital patients, etc. This localized impact can

result in elevated levels of CO, or “hotspots” even though concentrations at the closest air quality monitoring station may be below NAAQS and CAAQS.

The localized Project impacts depend on whether ambient CO levels in the proposed Project vicinity would be above or below NAAQS. If ambient levels are below the standards, a project is considered to have significant impacts if a project’s emissions would exceed of one or more of these standards. If ambient levels already exceed a state standard, a project’s emissions are considered significant if they would increase one-hour CO concentrations by 10 ppm or more or eight-hour CO concentrations by 0.45 ppm or more.

A traffic generation assessment impact study has been prepared for this project (see Appendix F) and determined the Project will not reduce any streets or intersections to a LOS E or F and will not substantially worsen any existing LOS F streets or intersections. In addition, all except one intersection will operate at a LOS of C (Appendix F). Therefore, CO “Hotspot” Modeling was not conducted for the proposed Project and no concentrated excessive CO emissions are expected to be caused once the proposed Project is completed. Any impacts would be *less than significant*.

As the estimated construction and operational emissions from the proposed Project would be *less than significant*, no specific mitigation measures would be required. However, to ensure the proposed Project is in compliance with all applicable rules and regulations and emissions are further reduced, the applicant will be required to implement and comply with a number of measures by regulation and would result in further emission reductions through their inclusion in Project construction and long-term design.

Mitigation Measures:

AIR-1: Land Preparation, Excavation and/or Demolition - The following dust control measures shall be implemented:

- All soil excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations.
- All clearing, grading, earth moving and excavation activities should cease during periods of winds greater than 20 mph (averaged over one hour), if disturbed material is easily windblown, or when dust plumes of 20% or greater opacity impact public roads, occupied structures or neighboring property.

- All fine material transported offsite should be either sufficiently watered or securely covered to prevent excessive dust.
- If more than 5,000 cubic yards of fill material will be imported or exported from the site, then all haul trucks should be required to exit the site via an access point where a gravel pad or grizzly has been installed.
- Areas disturbed by clearing, earth moving or excavation activities should be minimized at all times.
- Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.
- Where acceptable to the fire department, weed control shall be accomplished by mowing instead of discing, thereby, leaving the ground undisturbed and with a mulch covering.

AIR-2: Building Construction - After clearing, grading, earth moving and/or excavating, the following dust control practices shall be implemented:

- Once initial leveling has ceased all inactive soil areas within the construction site shall either be seeded and watered until plant growth is evident, treated with a dust palliative, or watered twice daily until soil has sufficiently crusted to prevent fugitive dust emission.
- All active disturbed soil areas shall be sufficiently watered to prevent excessive dust, but no less than twice per day.

AIR-3: Dust

- Onsite vehicle speed shall be limited to 15 mph.
- All areas with vehicle traffic shall be paved, treated with dust palliatives, or watered a minimum of twice daily.
- Streets adjacent to the project site shall be kept clean and accumulated silt removed.
- Access to the site shall be by means of an apron into the Project from adjoining surfaced roadways. The apron shall be surfaced or treated with dust palliatives. If operating on soils that cling to the wheels of the vehicles, a

grizzly or other such device shall be used on the road exiting the Project, immediately prior to the pavement, in order to remove most of the soil material from the vehicle's tires.

AIR-4: Tailpipe Emissions

- Properly maintain and tune all internal combustion engine powered equipment.
- Require employees and subcontractors to comply with California's idling restrictions for compression ignition engines.
- Use low sulfur (CARB) diesel fuel.

AIR-5: Equipment Exhaust

- Maintain all construction equipment as recommended by manufacturer manuals.
- Shut down equipment when not in use for extended periods of time.
- Construction equipment shall operate no longer than eight (8) cumulative hours per day.
- Use electric equipment for construction whenever possible in lieu of diesel or gasoline powered equipment.
- All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_x emissions.
- On-Road and Off-Road diesel equipment shall use diesel particulate filters if permitted under manufacturer's guidelines.
- Use of Caterpillar pre-chamber diesel engines or equivalent shall be utilized if economic and available to reduce NO_x emissions.
- All construction workers shall be encouraged to shuttle (car-pool) to retail establishments or to remain on-site during lunch breaks.
- All construction activities within the project area shall be discontinued during the first stage smog alerts.

- Construction and grading activities shall not be allowed during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds 0.20 ppm (1-hour average).

Impact 3.2-2: *Cause or contribute to an exceedance of any California or National Ambient Air Quality Standard?*

Less Than Significant Impact. An ambient air quality analysis was performed to determine if the proposed Project has the potential to impact ambient air quality through a violation of the ambient air quality standards or a substantial contribution to an existing or projected air quality standard. The basis for the analysis is dispersion modeling of the Project's long-term air quality impacts shown in Table 3.3-10.

The maximum off-site ground level concentration of each pollutant for the 1-hour, 3-hour, 8-hour, 24-hour and annual periods was predicted using the most recent version of EPA's AMS/EPA Regulatory Model (AERMOD) dispersion software under the Lakes Environmental ISC-AERMOD View interface. CARB-approved, AERMET processed meteorological datasets for calendar years 2009 through 2014 was input to AERMOD. This was the most recent available dataset available at the time the modeling runs were conducted. All of the regulatory default AERMOD model keyword parameters were employed. Rural dispersion parameters were used for this Project, which differs from the urban setting used in the CalEEMod model. The CalEEMod selection criteria is based on trip distances to the Project site while the AERMOD selection criteria is based on the majority of the land use surrounding the facility. The majority of the land surrounding the Project site is considered "rural" under the Auer land use classification method.⁶

Emissions were evaluated for each pollutant on a short-term (correlating to pollutant averaging period) and long term (annual) basis, with the exception of CO that was evaluated only for short-term exposures since there are no long-term significance thresholds for CO.

The majority of mobile emissions predicted by CalEEMod will occur beyond the Project boundary because of vehicle trips. In order to determine the average on-site vehicle emissions, the following methodology was utilized. An estimated on-site trip distance was determined by calculating the diagonal distance from the center of the Project to the furthest corner for each land use. The on-site estimated trip distances for the Project was determined to be 0.37 miles. The on-site estimated trip distance was then divided by the average trip length used in CalEEMod for the Project, 8.92

⁶ Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 4.8.

miles, in order to determine the on-site to off-site mobile emissions ratio for the Project, 4.15%. The total mobile emissions calculated by CalEEMod for the Project were then reduced to estimate the mobile on-site emissions used for ambient air quality modeling.

A fence-line coordinate grid of receptor points was constructed. The grid consisted of a 25-meter fence-line spacing and three receptor tiers. The first tier had 25-meter tier spacing extending a distance of 100 meters with initial receptors starting 25 meters from the facility boundary. The second tier had 50-meter tier spacing extending a distance of 200 meters and the third tier had 100-meter tier spacing extending a distance of 200 meters. Elevated terrain options were employed even though there is not complex terrain in the Project area.

For each pollutant and averaging period modeled, a “total” concentration was estimated by adding the maximum measured background air concentration to the maximum predicted Project impacts. The maximum measured background air concentrations used in this analysis were calculated from measured concentrations at the nearest monitoring stations.

The results of the air dispersion modeling, presented in Table 3.3-11, demonstrate that the maximum impacts attributable to the proposed Project, when considered in addition to the existing background concentrations, are below the applicable ambient air quality standard for NO_x, SO_x and CO. The electronic AERMOD output files are provided in Appendix D of Appendix B to this EIR.

Table 3.3-11
Predicted Ambient Air Quality Impacts

Pollutant	Averaging Period	Background (µg/m³)	Project (µg/m³)	Project + Background (µg/m³)	NAAQS (µg/m³)	CAAQS (µg/m³)
NO ₂	1-hour	97.20	12.17	109.37	188.68	339
	Annual	17.50	0.50	18.00	100	57
SO ₂	1-hour	27.90	0.09	27.99	196	655
	3-hour	25.11	0.07	25.18	1,300	---
	24-hour	7.62	0.03	7.65	365	105
	Annual	3.16	0.00	3.16	---	---
CO	1-hour	1,480.00	80.38	1,560.38	40,000	23,000
	8-hour	1,230.00	52.33	1,282.33	10,000	10,000
PM ₁₀	24-hour	92.00	1.55	93.55	150	50
	Annual	49.91	0.18	50.09	---	20
PM _{2.5}	24-hour	39.00	0.70	39.70	35	---
	Annual	7.10	0.08	7.18	12	12

Pre-Project concentrations of 24-hour and annual PM₁₀ and 24-hour PM_{2.5} exceed their respective ambient air quality standards. EKAPCD does not have a protocol to evaluate pollutants whose

background concentrations already exceed the ambient air quality standard (AAQS). Therefore, PM₁₀ and PM_{2.5} are evaluated in accordance with the San Joaquin Valley Air Pollution Control District's (SJVAPCD) recommended significant impact level (SIL) for fugitive PM₁₀ and PM_{2.5} emissions. It is the SJVAPCD's policy to use significant impact levels to determine whether a proposed new or modified source will cause or contribute significantly to an AAQS violation. If a project's maximum impacts are below the District SIL, the Project is judged to not cause or contribute significantly to an AAQS or PSD increment violation. A comparison of the proposed impact from the Project to the District SIL values is provided in Table 3.3-12.

Table 3.3-12
Comparison of Maximum Modeled Project Impact with Significance Thresholds

Pollutant	Averaging Period	Predicted Concentration ($\mu\text{g}/\text{m}^3$)	SIL ($\mu\text{g}/\text{m}^3$)
PM ₁₀	24-hour	1.55	10.4
	Annual	0.18	2.08
PM _{2.5}	24-hour	0.70	2.50

Because the proposed Project's modeled PM₁₀ and PM_{2.5} are below the SJVAPCD's significance levels for 24-hour and annual concentrations, the Project's contribution to potential violations of ambient air quality standards would be *less than significant*.

Mitigation Measures

None Required.

Impact 3.2-3: *Would the project exceed the District health risk public notification thresholds adopted by the EKAPCD Board?*

Less Than Significant Impact. Situations are considered for health risk wherein a new or modified source of Hazardous Air Pollutants (HAPs) is proposed for a location near an existing residential area or other sensitive receptor when evaluating potential impacts related to HAPs.

The proposed Project would not result in emissions of HAPs; therefore, an assessment of the potential risk to the population attributable to emissions of hazardous air pollutants from the proposed Project is not required. Any impacts would be less than significant.

Odor Impacts

An evaluation is typically conducted for both of the following situations: 1) a potential source of objectionable odors is proposed for a location near existing sensitive receptors, and 2) sensitive

receptors are proposed to be located near an existing source of objectionable odors. The criteria for this evaluation are based on the Lead Agency's determination of the proximity to one another of the proposed Project and the sensitive receptors. A sensitive receptor is a location where human populations, especially children, senior citizens and sick persons, are present, and where there is a reasonable expectation of continuous human exposure to pollutants, according to the averaging period for ambient air quality standards, i.e. the 24-hour, 8-hour or 1-hour standards. Commercial and industrial sources are not considered sensitive receptors. Table 3.3-10 lists the known sensitive receptors that are in relative close proximity (within a two mile radius) to the proposed Project area.

The proposed Project is not considered a source of objectionable odors or odorous compounds. Furthermore, there does not appear to be any significant source of objectionable odors in close proximity that may adversely impact the Project site when it is in operation. As such, the proposed Project will not be a source of any odorous compounds nor will it likely be impacted by any odorous source. Any impacts would be *less than significant*.

Mitigation Measures

None Required.

Impact 3.2-4: *Be consistent with adopted Federal and State Air Quality Attainment Plans?*

Less Than Significant. Air quality impacts from proposed projects within eastern Kern County are controlled through policies and provisions of the EKAPCD and the Kern County General Plan. In order to demonstrate that a proposed project would not cause further air quality degradation in either of the EKAPCD's plan to improve air quality within the air basin or federal requirements to meet certain air quality compliance goals, each project should also demonstrate consistency with the EKAPCD's Attainment Plans. The EKAPCD is required to submit a "Rate of Progress" document to the CARB that demonstrates past and planned progress toward reaching attainment for all criteria pollutants. The California Clean Air Act (CCAA) requires the local air districts with severe or extreme air quality problems to provide for a 5% reduction in non-attainment emissions per year. The Attainment Plans prepared for the Eastern Kern County by the EKAPCD complies with this requirement. CARB reviews, approves or amends the document and forwards the plan to the U.S. Environmental Protection Agency (U.S. EPA) for final review and approval within the State Implementation Plan (SIP).

Air pollution sources associated with stationary sources are regulated through the EKAPCD permitting authority under the New and Modified Stationary Source Review Rule (EKAPCD Rule 210.1). Owners of any new or modified equipment that emits, reduces or controls air

contaminants, except those specifically exempted by the EKAPCD, are required to apply for an Authority to Construct and Permit to Operate (EKAPCD Rule 201). Additionally, best available control technology (BACT) is required on specific types of stationary equipment and are required to offset both stationary source emission increases along with increases in cargo carrier emissions if the specified threshold levels are exceeded (EKAPCD Rule 210.1, III.B.3). Through this mechanism, the EKAPCD would ensure that all stationary sources within a project area would be subject to the standards of the EKAPCD to ensure that new developments do not result in net increases in stationary sources of criteria air pollutants.

Required Evaluation Guidelines

State CEQA Guidelines and the Federal Clean Air Act (Sections 176 and 316) contain specific references on the need to evaluate consistencies between a proposed project and the applicable AQAP for the Project site. To accomplish this, CARB has developed a three-step approach to determine Project conformity with the applicable AQAP:

1. Determination that an AQAP is being implemented in the area where the Project is being proposed. The EKAPCD has implemented the current, modified, AQAP as approved by the CARB. The current AQAP is under review by the U.S. EPA.
2. The proposed Project must be consistent with the growth assumptions of the applicable AQAP. The proposed Project is included within the population and employment increases projected in the Kern County General Plan.
3. The Project must contain in its design all reasonably available and feasible air quality control measures. The proposed Project incorporates various policy and rule-required implementation measures that will reduce related emissions.

The CCAA and AQAP identify transportation control measures as methods to further reduce emissions from mobile sources. Strategies identified to reduce vehicular emissions such as reductions in vehicle trips, vehicle use, vehicle miles traveled, vehicle idling and traffic congestion, in order to reduce vehicular emissions, can be implemented as control measures under the CCAA as well. Additional measures may also be implemented through the building process such as providing electrical outlets on exterior walls of structures to encourage use of electrical landscape maintenance equipment.

As the growth represented by the proposed Project was anticipated by the Kern County General Plan and incorporated into the AQAP, conclusions may be drawn from the following criteria:

1. The findings of the analysis conducted using Traffic Analysis Zones show that sufficient employment and population increases are planned for the Project area;
2. That, by definition, the proposed emissions from the Project are below the EKAPCD's established emissions impact thresholds; and
3. That the primary source of emissions from the Project would be motor vehicles which would be licensed through the State of California and whose emissions are already incorporated into the CARB's Kern County's Emissions Inventory.

Based on these factors, the Project appears to be consistent with the AQAP.

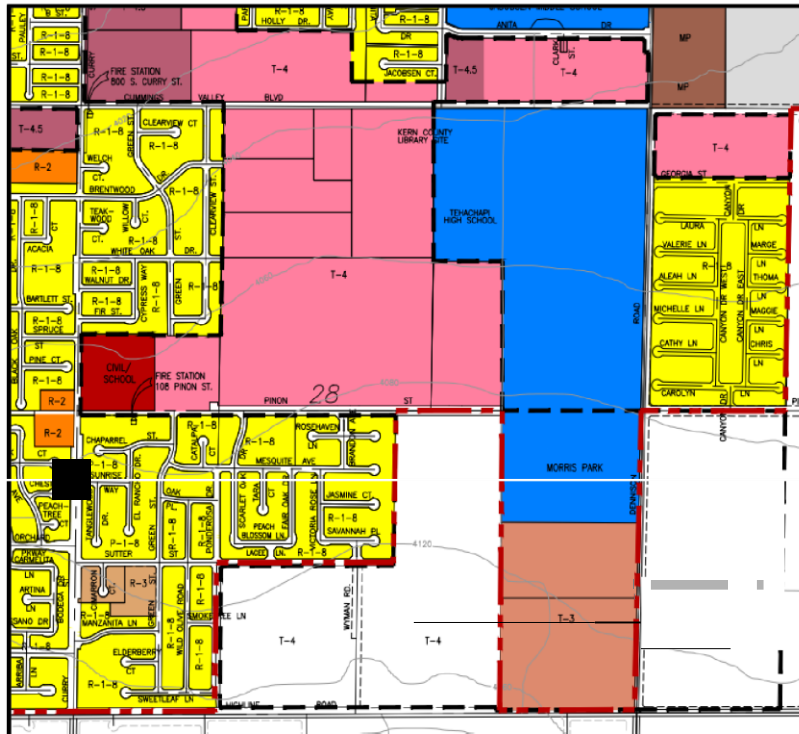
Consistency with the Kern Council of Government's Regional Conformity Analysis

The Kern Council of Governments (Kern COG) Regional Conformity Analysis Determination demonstrates that the regional transportation expenditure plans (Destination 2030 Regional Transportation Plan and Federal Transportation Improvement Program) in the Kern County portion of the Mojave Desert air quality attainment areas would not hinder the efforts set out in the CARB's SIP for each area's non-attainment pollutants (CO, O₃ and PM₁₀). The analysis uses an adopted regional growth forecast, governed by both the adopted Kern COG Policy and Procedure Manual and a Memorandum of Understanding between the County of Kern and Kern COG (representing itself and outlying municipal member agencies).

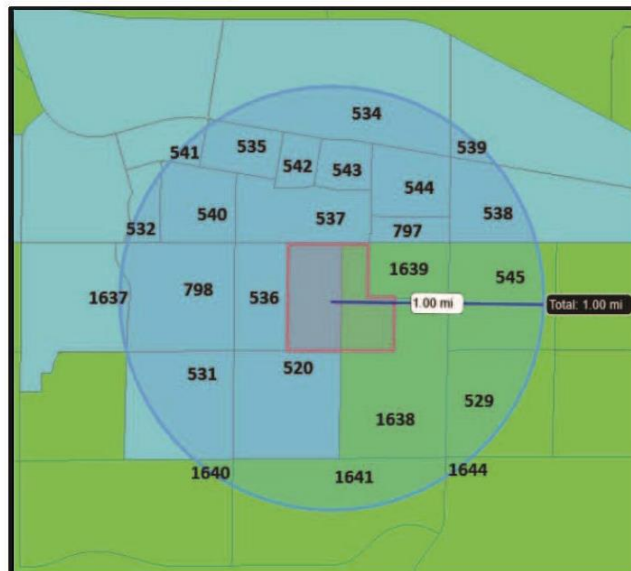
The Kern COG Regional Conformity Analysis considers General Plan Amendments (GPA) and zone changes that were enacted at the time of the analysis as projected growth within the area based on land use designations incorporated within the Kern County General Plan. Land use designations that are altered based on subsequent GPAs that were not included in the Regional Conformity Analysis were not incorporated into the Kern COG analysis. Consequently, if a proposed project is not included in the regional growth forecast using the latest planning assumptions, it may not be said to conform to the regional growth forecast.

Item 2 under Section 3 – Model Maintenance Procedure, of the Kern COG Regional Transportation Modeling Policy and Procedure Manual states *“Land Use Data – General Plan land capacity data or “Build -out capacity” is used to distribute the forecasted County totals, and may be updated as new information becomes available, and is revised in regular consultation with local planning departments.”*

The proposed Project is currently designated as “T-4” for Neighborhood General and could be included in the regional growth forecast, as demonstrated in Figure 3.3-1 and Table 3.3-13.

Figure 3.3-1: Kern County Zoning

In addition, a review of Kern COG regional forecast was prepared to evaluate if the Project area growth forecast would be sufficient to account for the Project's projected employment increase. The adopted growth forecasts are assigned to Traffic Analysis Zones (TAZ)(see Figure 3.2-2); a review of the growth forecast one mile from a project presents a conservative assessment of the Project area. The TAZ's included in the one mile radius from the proposed Project site are: 520, 529, 531, 532, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 797, 798, 1637, 1638, 1639, 1640, 1641, and 1644.

Figure 3.3-2: 1-Mile TAZ Map

Tables 3.3-13 and 3.3-14 present the summary of the TAZ growth forecast data for the Project's one-mile radius.

Table 3.3-13
TAZ Analysis Area Projected Growth Analysis⁷

Years:	2017	2020	2030
Population	7,247	7,649	10,441
Households	2,807	2,960	3,269
Employment	3,058	3,269	5,002

Table 3.3-14
Percent Increase/Decrease on TAZ Analysis Area

Years	Percent Increase / Decrease		
	Population	Households	Employment
2017*	0	0	0
2020	6	5	7
2030	44	40	64

*Baseline year of 2017 was valued at "0" to measure net percent increase/decrease.

Given there is already enough population and households to account for the proposed residential community, the Project would be considered consistent with the adopted growth forecast and, therefore, in conformance with the EKAPCD's AQAP. Any impacts would be *less than significant*.

Mitigation Measures

None Required.

⁷ Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 6.4.

3.4 Biological Resources

This section of the DEIR addresses the biological resources present within the proposed Project area. The section includes a discussion of the special-status species that may potentially occur within the proposed Project area as well as any sensitive habitats in the area. It also recognizes the potential impacts of implementing the proposed Project on such resources and identifies mitigation measures, where appropriate. No IS/NOP comment letters were received pertaining to this topic. The information and analysis presented in this Section are based on the desktop review and reconnaissance site survey conducted by Colibri Ecological Consulting, LLC (Colibri). The full biological evaluation is provided in Appendix C.

Environmental Setting

The Tehachapi Valley is rich in environmental resources, both within town and in the surrounding areas of the Valley. These resources range from the flora and fauna and ecosystems of the Tehachapi Mountains to the south end of the Sierra Nevada Mountains. Between the natural mountainsides, foothills, and the town of Tehachapi itself, agriculture provides a potential source of locally grown food, as well as a physical transition and economic resource for the town and surrounding communities.

The City of Tehachapi and its immediate surroundings retain an open character, and opportunity for movement between the Tehachapi and Sierra Nevada Ranges is likely to remain for medium and large-bodied mammal species tolerant of human development. However, development of State Route 58 has resulted in a disruption of traditional wildlife corridors in the area. Agricultural areas, and a pond associated with a water treatment plant provide foraging opportunities for a suite of migratory and colonial bird species.¹

Major terrestrial communities in the City of Tehachapi include foothill pine oak woodland, non-native grassland, scrub oak chaparral. Other vegetation types in the City of Tehachapi include urban, agriculture, riparian, and wetland types.

Desktop Review

The United States Fish & Wildlife Service (USFWS) species list for the Project includes three species listed as threatened or endangered under the Federal Endangered Species Act. Those species include the endangered California condor (*Gymnogyps californianus*), the endangered

¹ City of Tehachapi General Plan DEIR. Page 4.4-2

blunt-nosed leopard lizard (*Gambelia sila*), and the threatened California red-legged frog (*Rana draytonii*).

Searching the California Natural Diversity Database (CNDDDB) for records of special-status species from the Tehachapi South 7.5-minute USGS topographic quad and the eight surrounding quads produced 159 records of 43 species, as provided in Appendix C. Of those, 21 are known from within five miles of the Project site, as demonstrated in Figure 3.4-1 and provided in Table 3.4-1. Of those 21 species, four are not given further consideration because they are not recognized as special-status species by state or federal regulatory agencies. Those species include Comstock's blue butterfly (*Euphilotes battoides comstocki*), Tehachapi silverspot butterfly (*Speyeria egleis tehachapina*), yellow-blotched salamander (*Ensatina eschscholtzii croceator*), and prairie falcon (*Falco mexicanus*).

Searching the California Native Plant Society inventory of rare and endangered plants of California yielded 34 taxa, 20 of which have of a Rare Plant Rank of 1B or 2B (see Table 3.4-1). None of those species are expected to occur on or near the Project site due to a lack of habitat or a lack of records from within five miles (Table 3.4-1).

The Project site is underlain by Steuber sandy loam, 0 to 2 percent slopes and Steuber sandy loam, 2 to 5 percent slopes. The site has been disturbed by plowing or disking at least since 1992, when portions of the Project site were under cultivation, according to Google Earth historical imagery.

Table 3.4-1 - Potential Special-status Species

Species	Status ¹	Habitat	Potential to Occur ²
Federally and State-Listed Endangered or Threatened Species			
Crotch bumble bee (<i>Bombus crotchii</i>)	SCE	Grassland and scrub.	None. Habitat lacking.
California red-legged frog (<i>Rana draytonii</i>).	FT, SSC	Creeks, ponds, and marshes for breeding; burrows for upland refuge.	None. Habitat lacking; Project site lacks required aquatic habitat features.
Foothill yellow-legged frog (<i>Rana boylei</i>)	SCT	Rocky streams and rivers with rocky substrates; open, sunny banks in forests, chaparral, and woodlands.	None. Habitat lacking; Project site lacks required aquatic habitat features.
Tehachapi slender salamander (<i>Batrachoseps stebbinsi</i>)	ST	North-facing moist canyons and ravines in oak woodland with talus slopes, debris, and leaf litter.	None. Habitat lacking.
Blunt-nosed leopard lizard (<i>Gambelia silus</i>)	FE, SE, FP	Upland scrub and sparsely vegetated grassland with small	None. Habitat lacking; Project site is above known elevation range.

Species	Status ¹	Habitat	Potential to Occur ²
		mammal burrows between 100 and 2400 feet elevation.	
Desert tortoise (<i>Gopherus agassizii</i>)	FT, ST	Sandy flats to rocky foothills, alluvial fans, washes, and canyons with overhanging rocks or bushes; between sea level and 3500 feet elevation.	None. Habitat lacking; Project site is above known elevation range.
California condor (<i>Gymnogyps californianus</i>)	FE, SE	Rocky, forested regions including canyons, gorges and mountains.	None. Habitat lacking.
Swainson's hawk (<i>Buteo swainsoni</i>)	ST	Large trees for nesting with open areas for foraging.	None. Outside current known local range; no records from within 5 miles.
Tricolored blackbird (<i>Agelaius tricolor</i>)	ST, SSC	Freshwater marsh with emergent vegetation or other areas with prickly or thorny vegetation for nesting; wetlands, grassland, feedlots, and some agricultural fields (especially alfalfa fields) for foraging.	Present. A total of 18 birds observed during the survey, including three that landed on the Project site and 15 that flew over it.
American badger (<i>Taxidea taxus</i>)	SSC	Grasslands and open habitats with friable soil and a small mammal prey base.	None. Habitat lacking; Project site is open with friable soils but mammal prey base nearly absent, and no records from within five miles.
Burrowing owl (<i>Athene cunicularia</i>)	SSC	Open, treeless areas with sparse vegetation in grassland, desert, or agricultural fields with subterranean burrows or burrow surrogates with openings > 4 inches.	None. Habitat lacking; Project site is densely vegetated and lacks suitably sized burrows or burrow surrogates; no records from within five miles.
Coast horned lizard (<i>Phrynosoma blainvillii</i>)	SSC	Open, generally sandy areas, washes, and flood plains in a variety of habitats.	None. Habitat lacking; Project site contains sandy soils but is densely vegetated and subject to periodic ground disturbance by disking.
Golden eagle (<i>Aquila chrysaetos</i>)	FP	Cliffs or large trees in open areas for nesting; open grassland, desert, savannah, or early-successional forest for foraging.	None. Habitat lacking.

Species	Status ¹	Habitat	Potential to Occur ²
LeConte's thrasher (<i>Toxostoma lecontei</i>)	SSC	Sparsely vegetated saltbush scrub.	None. Habitat lacking.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	SSC	Open areas with short vegetation and well-spaced shrubs or low trees for nesting.	None. Habitat lacking; Project site lacks trees or shrubs.
Northern California legless lizard (<i>Anniella pulchra</i>)	SSC	Moist warm loose soil in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, and sandy wash.	None. Habitat lacking.
Tehachapi pocket mouse (<i>Perognathus alticola inexpectatus</i>)	SSC	Prefers loose, sandy soils in grasslands, chaparral, coastal sage, Joshua tree woodland, piñon-juniper and yellow pine woodland, and oak savanna; between 3500 and 6000 feet.	None. Habitat lacking.
Tulare grasshopper mouse (<i>Onychomys torridus tularensis</i>)	SSC	Arid upland scrub with alkaline soils.	None. Habitat lacking.
Alkali mariposa-lily (<i>Calochortus striatus</i>)	1B.2	Alkaline and mesic chaparral, chenopod scrub, Mojavean desert scrub, and meadows and seeps.	None. Habitat lacking.
Baja navarretia (<i>Navarretia peninsularis</i>)	1B.2	Mesic chaparral openings, yellow-pine forest, meadows and seeps, and piñon-juniper woodland between 4920 and 7550 feet elevation.	None. Habitat lacking; Project site is below known elevation range.
Calico monkeyflower (<i>Mimulus pictus</i>)	1B.2	Bare, sunny, shrubby areas, around granite outcrops between 330 and 4690 feet elevation.	None. Habitat lacking.
Coulter's goldfields (<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>)	1B.1	Saltmarsh, playas, and vernal pools between sea level and 4000 feet elevation.	None. Habitat lacking.
Greenhorn fritillary (<i>Fritillaria brandegeei</i>)	1B.3	Lower montane conifer forest with granitic soils.	None. Habitat lacking.
Grey-leaved violet (<i>Viola pinetorum</i> ssp. <i>grisea</i>)	1B.3	Meadows and seeps in subalpine conifer forest and upper montane conifer forest.	None. Habitat lacking.
Horn's milk-vetch (<i>Astragalus hornii</i> var. <i>hornii</i>)	1B.1	Lake margins, meadows, seeps, and playas with alkaline soils.	None. Habitat lacking.
Kern buckwheat (<i>Eriogonum kennedyi</i> var. <i>pinicola</i>)	1B.1	Chaparral and pinyon and juniper woodland with clay soils.	None. Habitat lacking.

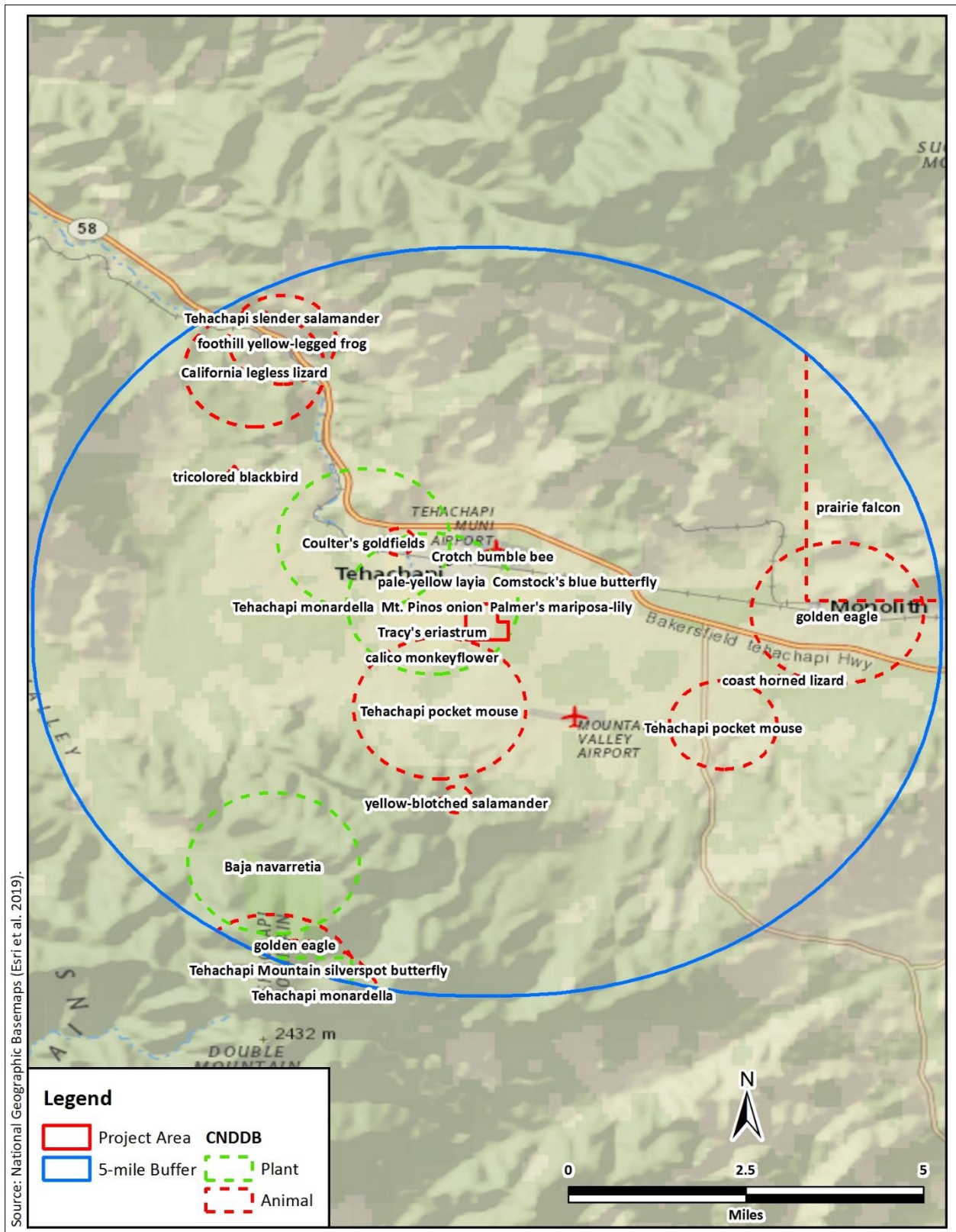
Species	Status ¹	Habitat	Potential to Occur ²
Latimer's woodland-gilia (<i>Saltugilia latimeri</i>)	1B.2	Rocky, sandy, or granitic areas in chaparral, Mojavean desert scrub, and pinyon and juniper woodland.	None. Habitat lacking.
Madera leptosiphon (<i>Leptosiphon serrulatus</i>)	1B.2	Woodland and chaparral openings between 980 and 4300 feet elevation.	None. Habitat lacking.
Mt. Pinos onion (<i>Allium howellii</i> var. <i>clokeyi</i>)	1B.3	Edges of meadows and seeps, Great Basin scrub, and piñon-juniper woodland.	None. Habitat lacking.
Pale-yellow layia (<i>Layia heterotricha</i>)	1B.1	Cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley and foothill grassland with alkaline or clay soils.	None. Habitat lacking.
Palmer's mariposa-lily (<i>Calochortus palmeri</i> var. <i>palmeri</i>)	1B.2	Meadows and seeps, chaparral, and lower montane coniferous forest between 2330-7840 feet elevation.	None. Habitat lacking.
Piute Mountain navarretia (<i>Navarretia setiloba</i>)	1B.1	Cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland with clay or gravelly loam soils.	None. Habitat lacking.
Piute Mountain triteleia (<i>Triteleia piutensis</i>)	1B.1	Openings in pinyon and juniper woodland with fine volcanic soil among scattered boulders or heavy clay soil with volcanic hardpan.	None. Habitat lacking.
Piute Mountains jewelflower (<i>Streptanthus cordatus</i> var. <i>piutensis</i>)	1B.1	Broadleaf upland forest, closed-cone conifer forest, and pinyon-juniper woodland with clay or metamorphic soils.	None. Habitat lacking.
Sagebrush loeflingia (<i>Loeflingia squarrosa</i> var. <i>artemisiarum</i>)	2B.2	Desert dunes, Great Basin scrub, and Sonoran Desert scrub.	None. Habitat lacking.
Spanish Needle onion (<i>Allium shevockii</i>)	1B.3	Rocky areas in pinyon and juniper woodlands and upper montane conifer forests.	None. Habitat lacking.
Spjut's bristle moss (<i>Orthotrichum spjutii</i>)	1B.3	Rocky or granitic areas in lower montane conifer forest, pinyon and juniper woodland, subalpine conifer forest, and upper montane conifer forest.	None. Habitat lacking.
Tehachapi monardella (<i>Monardella linoides</i> ssp. <i>oblonga</i>)	1B.3	Lone formation and other soils in chaparral and cismontane woodland at 260–3510 feet elevation.	None. Habitat lacking; Project site is above known elevation range.
Tejon poppy (<i>Eschscholzia</i>)	1B.1	Chenopod scrub and valley and foothill grassland.	None. Habitat lacking.

Species	Status ¹	Habitat	Potential to Occur ²
<i>lemmonii</i> ssp. <i>kernensis</i>)			

Status¹ (CDFW 2019, CNPS 2019, and USFWS 2019).	Potential to Occur²
FE = Federally listed as Endangered	None: Species or sign not observed; conditions unsuitable for occurrence.
FT = Federally listed as Threatened	Present: Species or sign was observed.
FP = State Fully Protected	
SCE = State Candidate for listing as Endangered	
SCT = State Candidate for listing as Threatened	
SE = State-listed Endangered	
ST = State-listed Threatened	
SSC = State Species of Special Concern	

CNPS California Rare Plant Rank:	Threat Ranks:
1B – plants rare, threatened, or endangered in California and elsewhere.	0.1 – seriously threatened in California (> 80% of occurrences).
2B – plants rare, threatened, or endangered in California but more common elsewhere.	0.2 – moderately threatened in California (20-80% of occurrences).
	0.3 – not very threatened in California (<20% of occurrences).

Figure 3.4-1 - CNDDDB Occurrence Map



Reconnaissance Survey

Colibri surveyed the proposed Project site in June of 2019. The survey revealed that the site consists of fallow agricultural fields that were likely plowed historically when under cultivation and disked more recently for fire suppression. It is densely vegetated with ruderal plants (see Photos 1 and 2) and contains very few small mammal burrows. Nonnative plants such as red stemmed filaree (*Erodium cicutarium*), black mustard (*Brassica nigra*), and Indian hedge mustard (*Sisymbrium orientale*) and ruderal native plants such as bristly fiddleneck (*Amsinckia tessellata*) dominate the site.

Photo 1 – Dense Ruderal Plant Cover



Photo 2 – Dense Ruderal Plant Cover



In all, 30 plant species (12 native, 17 nonnative, and one unknown) and 19 animal species were observed during the survey (Table 3.4-2).

Table 3.4-2: Observed Plants and Animals

Common Name	Scientific Name	Status
PLANTS		
Family Asteraceae		
Annual agoseris	<i>Agoseris heterophylla</i> var. <i>heterophylla</i>	Native
Annual bursage	<i>Ambrosia acanthicarpa</i>	Native
California matchweed	<i>Gutierrezia californica</i>	Native
Common gumplant	<i>Grindelia camporum</i>	Native
Cottonbattling plant	<i>Pseudognaphalium stramineum</i>	Native
Goat's beard	<i>Tragopogon dubius</i>	Nonnative
Prickly lettuce	<i>Lactuca serriola</i>	Nonnative
Tocalote	<i>Centaurea melitensis</i>	Nonnative
Western thistle	<i>Cirsium occidentale</i>	Native
Family Boraginaceae		
Bristly fiddleneck	<i>Amsinckia tessellata</i>	Native
Family Brassicaceae		
Black mustard	<i>Brassica nigra</i>	Nonnative
Indian hedge mustard	<i>Sisymbrium orientale</i>	Nonnative
Wild radish	<i>Raphanus sativus</i>	Nonnative
Slender tropidocarpum	<i>Tropidocarpum gracili</i>	Native
Family Chenopodiaceae		
Russian thistle	<i>Salsola tragus</i>	Nonnative
Family Fabaceae		
Alfalfa	<i>Medicago sativa</i>	Nonnative
Douglas's milkvetch	<i>Astragalus douglasii</i>	Native
Lupine	<i>Lupinus</i> sp.	Native
Family Geraniaceae		
Red stemmed filaree	<i>Erodium cicutarium</i>	Nonnative
Family Lamiaceae		
White horehound	<i>Marrubium vulgare</i>	Nonnative
Family Papaveraceae		
California poppy	<i>Eschscholzia californica</i>	Native
Family Poaceae		
Annual grass	<i>Bromus diandrus</i>	Nonnative
Barley	<i>Hordeum</i> sp.	?
Bulbous blue grass	<i>Poa bulbosa</i>	Nonnative
Common wheat	<i>Triticum aestivum</i>	Nonnative
Foxtail brome	<i>Bromus madritensis</i> ssp. <i>rubens</i>	Nonnative
Rattail sixweeks grass	<i>Festuca myuros</i>	Nonnative
Family Polygonaceae		

Prostrate knotweed	<i>Polygonum aviculare</i>	Nonnative
Family Salicaceae		
Arroyo willow	<i>Salix lasiolepis</i>	Native
Family Ulmaceae		
Elm	<i>Ulmus</i> sp.	Nonnative
BIRDS		
Family Accipitridae		
Red-tailed hawk	<i>Buteo jamaicensis</i>	MBTA, CFGC
Family Alaudidae		
Horned lark	<i>Eremophila alpestris</i>	MBTA, CFGC
Family Cathartidae		
Turkey vulture	<i>Cathartes aura</i>	MBTA, CFGC
Family Charadriidae		
Killdeer	<i>Charadrius vociferus</i>	MBTA, CFGC
Family Columbidae		
Rock pigeon	<i>Columba livia</i>	None
Family Corvidae		
American crow	<i>Corvus brachyrhynchos</i>	MBTA, CFGC
Common raven	<i>Corvus corax</i>	MBTA, CFGC
Family Fringillidae		
House finch	<i>Haemorrhous mexicanus</i>	MBTA, CFGC
Lawrence's goldfinch	<i>Spinus lawrencei</i>	MBTA, CFGC
Family Icteridae		
Red-winged blackbird	<i>Agelaius phoeniceus</i>	MBTA, CFGC
Tricolored blackbird	<i>Agelaius tricolor</i>	MBTA, CFGC, ST
Brewer's blackbird	<i>Euphagus cyanocephalus</i>	MBTA, CFGC
Family Mimidae		
Northern mockingbird	<i>Mimus polyglottos</i>	MBTA, CFGC
Family Passeridae		
House sparrow	<i>Passer domesticus</i>	None
Family Sturnidae		
European starling	<i>Sturnus vulgaris</i>	None
Family Tyrannidae		
Say's phoebe	<i>Sayornis saya</i>	MBTA, CFGC
MAMMALS		
Family Geomyidae		
Botta's pocket gopher	<i>Thomomys bottae</i>	None
Family Sciuridae		
California ground squirrel	<i>Otospermophilus beecheyi</i>	None
REPTILES		
Family Phrynosomatidae		
Common side-blotched lizard	<i>Uta stansburiana</i>	None

Jurisdictional Water Areas

Jurisdictional water areas in the City of Tehachapi are comprised of natural drainages originating primarily in the foothills north and south of the City, and artificial drainages associated with roads and housing development (with sag ponds and sedge-rush meadows being present sporadically) throughout the valley bottom. There are no jurisdictional water areas on the proposed Project site.

Regulatory Setting

Federal Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (16 U.S.C. 704)(MBTA) makes it unlawful to “take” (kill, harm, harass, etc.) any migratory bird listed in 50 Code of Federal Regulations 10, including their nests, eggs, or products. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many other species.

Federal Endangered Species Act of 1973

Section 3 of the federal Endangered Species Act (ESA) defines an endangered species as any species or subspecies “in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as any species or subspecies of fish, wildlife, or plants “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Threatened or endangered species and their critical habitat are designated through publication of a final rule in the Federal Register. Designated endangered and threatened animal species are fully protected from “take” unless an applicant has an incidental take permit issued by the USFWS under Section 10 or incidental take statement issued under Section 7 of the ESA. A take is defined as the killing, capturing, or harassing of a species. Proposed endangered or threatened species, or their critical habitats, are those for which a proposed regulation, but no final rule, has been published in the Federal Register.

Federal Clean Water Act Section 404, Jurisdictional Waters

The U.S. Army Corps of Engineers (Corps), pursuant to Section 404 of the Clean Water Act regulates discharges into “waters of the United States.” While some streams within the Tehachapi area meet the definition of waters of the U.S., the nearest ones to the Project site do not meet the criteria for federal jurisdiction set by the U.S. Supreme Court, in that they are not navigable and are not tributary to any navigable waters. In addition, these streams have no connection to

interstate commerce outside of the specific uses precluded by the Supreme Court regarding the Migratory Bird amendment. While verification of the lack of jurisdiction should be ascertained with the U.S. Corps of Engineers, there is not federal authority under the Clean Water Act.

California Endangered Species Act

The California Endangered Species Act (CESA) declares that deserving plant or animal species will be given protection by the State because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA establishes that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats. Under State law, plant and animal species may be formally designated as rare, threatened, or endangered through official listing by the California Fish & Wildlife (CDFW) Commission. Listed species are given greater attention during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

On private property, endangered plants may also be protected by the Native Plant Protection Act (NPPA) of 1977. Threatened plants are protected by CESA, and rare plants are protected by the NPPA. However, CESA authorizes that “Private entities may take plant species listed as endangered or threatened under the ESA and CESA through a Federal incidental take permit issued pursuant to Section 10 of the ESA, if the CDFG certifies that the incidental take statement or incidental take permit is consistent with CESA.”

In addition, the California Environmental Quality Act (CEQA) requires disclosure of any potential impacts on listed species and alternatives or mitigation that would reduce those impacts.

California Environmental Quality Act—Treatment of Listed Plant and Animal Species

ESA and CESA protect only those species formally listed as threatened or endangered (or rare in the case of the State list). Section 15380 of the CEQA Guidelines independently defines “endangered” species of plants or animals as those whose survival and reproduction in the wild are in immediate jeopardy and “rare” species as those who are in such low numbers that they could become endangered if their environment worsens. Therefore, a project normally will have a significant effect on the environment if it will substantially affect a rare or endangered species of animal or plant or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

State of California—Section 1602 of the California Fish and Game Code

Streambeds and other drainages that occur within the Planning Area are subject to regulation by the CDFW. Please note that although the agency is now called the California Department of Fish & Wildlife, the State Code is still named the California Department of Fish and Game (CDFG) Code. For purposes of this document, these terms are interchangeable. The CDFW considers most drainages to be “streambeds” unless it can be demonstrated otherwise. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel with banks and supports fish or other aquatic life. This includes watercourses having a surface or sub-surface flow that supports, or has supported, riparian vegetation. CDFW jurisdiction typically extends to the edge of the riparian canopy, and therefore, usually encompasses a larger area than Corps jurisdiction.

State of California – Porter Cologne Act

The State Water Quality Control Board has ruled after the U.S. Supreme Court decisions to reduce the federal jurisdiction over Waters of the U.S., that the State would require that a Waste Discharge Report be required for any discharge of waste, including fill, into “waters of the state”, other than those projects requiring a federal Section 404 permit and the State’s Section 401 Certification of the federal permit, under the authority of the Porter Cologne Act. This essentially extends the State’s assumption of the NPDES program, by modifying the definition of waste. The Regional Water Quality Control Board is responsible for issuing Waste Discharge Permits.

State of California—Sections 3503, 3503.5, and 3800 of the California Fish and Game Code

These sections of the Fish and Game Code prohibit the “take or possession of birds, their nests, or eggs.” Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a “take.” Such a take would also violate Federal law protecting migratory birds.

Incidental Take Permits (*i.e.*, Management Agreements) are required from the CDFG for projects that may result in the incidental take of species listed by the State of California as endangered, threatened, or candidate species. The permits require that impacts to protected species be minimized to the extent possible and mitigated to a level of insignificance.

City of Tehachapi General Plan

There are no Habitat Conservation Plans or other related conservation plans in or near the City of Tehachapi. Local agencies, such as the City of Tehachapi Planning Department and the

Department of Public Works, aid in the protection and preservation of sensitive natural resources in exercising land use controls. The Conservation Element of the City of Tehachapi General Plan, combined with other General Plan Update Elements, strives to achieve this control in defining certain objectives, and policies for the conservation of sensitive natural resources. Relevant goals, objectives, and policies are presented below, and the identification of such goals, objectives, and policies are consistent with that outlined in the Conservation Element of the City's General Plan.

Tehachapi General Plan Policies

Natural Resources Element

Objective 1 Protect Important Natural Habitat for it to Function Appropriately in Support of Wildlife

Policy NR26 As part of the discretionary review process for development proposals, identify significant resources through project design.

Policy NR27 Maintain Antelope Run as a natural corridor to foster wildlife while being flanked by recreational trails and appropriate, low-intensity urban uses.

Policy NR28 Protect and/or restore identified resources and areas.

Objective 2 Require the use of Native Plant Species in Rural and Urban Areas

Policy NR30 Enhance the existing tree resources through regulations that set forth thresholds for identifying and protecting a significant tree resource.

Policy NR31 Maintain planting standards that:

- a. Minimize the need for water
- b. Reflect the various intended physical contexts to which they will be applied.

Objective 3 Improve Access to Natural Areas for Enjoyment by the Community

Policy NR32 Maintain standards that:

- a. Prohibit walls from blocking views of, or access into, natural areas
- b. Reflect the intended physical context(s) to which the standards are to be applied

- c. Require appropriate and contextually responsive connections between urban and rural areas
- d. Treat paths, trails, etc., as an integral part of the adjacent, intended physical context

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item. In accordance with Appendix G of the CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service;
- 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;
- 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 site; (e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impacts and Mitigation Measures

Impact 3.4-1: *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 California Department of Fish and Game or the U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporation.

One special-status species, the state-listed as threatened tricolored blackbird (*Agelaius tricolor*), could occur on or near the Project site based on its presence on and near the site during the reconnaissance survey (Table 3.4-2). This species breeds in freshwater marshes, where it nests colonially in emergent vegetation such as cattails (*Typha* spp.) or bulrushes (*Schoenoplectus* spp.). Less frequently it nests in prickly or thorny vegetation such as blackberries (*Rubus* spp.), thistles (*Cirsium* and *Centaurea* spp.), and nettles (*Urtica* sp.) and sometimes black mustard (*Brassica nigra*) (Beedy et al. 2018). It forages for seeds and insects in wetlands, irrigated pastures, grasslands, some agricultural fields (especially alfalfa), and other areas.

Eighteen individuals in two flocks were observed during the reconnaissance survey. One flock of three landed briefly on the north edge of the Project site. A second flock of 15 flew low over the site from east to west. Although no evidence of nesting was found on the Project site during the reconnaissance survey, dense stands of black mustard on a portion of the site, as demonstrated in Photos 1 and 2, could provide suitable nesting substrates.

The Project could substantially impact one state-listed species, tricolored blackbird. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or young or otherwise lead to nest abandonment. Such loss or abandonment would constitute a significant impact. Implementation of Mitigation Measure BIO-1 will ensure that any impacts remain *less than significant*.

Mitigation Measure:

BIO-1: Protection of nesting tricolored blackbirds.

To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August. If it is not possible to schedule construction between September and January, a pre-construction clearance survey for nesting tricolored blackbirds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the start of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and within 350 feet of the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist

in consultation with the CDFW shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has failed for non-construction related reasons.

Impact 3.4-2: *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service, or have a substantial adverse effect on federally or state-protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Less Than Significant Impact.

No sensitive or potentially regulated habitats were found on or within 50 feet of the Project site. As such, any impacts would be *less than significant*.

Mitigation Measures: None are required.

Impact 3.4-3: *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 site; (e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Less Than Significant Impact with Mitigation Incorporation.

Migratory birds could nest on or near the Project site. Species that may nest on or near the Project site include but are not limited to horned lark (*Eremophila alpestris*) and red-winged blackbird (*Agelaius phoeniceus*).

The Project has the potential to impede the use of nursery sites for native birds protected under the MBTA and CFGC. Migratory birds are expected to nest on and near the Project site. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment or loss of reproductive effort can be considered take under the MBTA and CFGC. Loss of fertile eggs or nesting birds, or any activities resulting in nest abandonment, could

constitute a significant effect if the species is particularly rare in the region. Construction activities such as excavating, trenching, and grading that disturb a nesting bird on the Project site or immediately adjacent to the construction zone could constitute a significant effect. Implementation of Mitigation Measure BIO-2 will ensure that any impacts remain *less than significant*.

Mitigation Measure:

BIO-2: Protection of nesting birds.

To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August. If it is not possible to schedule construction between September and January, a pre-construction clearance survey for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the start of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas, including within 250 feet in the case of raptor nests. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has failed for non-construction related reasons.

Impact 3.4-4: *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No Impact. The proposed Project site and the surrounding vicinity are not part of any adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. As such, the construction and operation of the proposed Project would have *no impact* on any adopted habitat conservation plan.

Mitigation Measures: None are required.

3.6 Energy

This section of the DEIR analyzes the Project's potential impacts on energy resources. The data utilized for analysis of this section is based on the Air Quality Impact Analysis (AQIA) prepared for this Project by Insight Environmental Consultants, specifically, the Project Emission Calculations. The full AQIA can be reviewed in Appendix B. No IS/NOP comments were received pertaining to energy.

Environmental Setting

Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, including substations and transformers that lower transmission line power (voltage) to a level appropriate for on-site distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Conveyance of electricity through transmission lines is typically responsive to market demands.

Energy Usage

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 7,881 trillion BTU's in 2017 (the most recent year for which this specific data is available), which equates to an average of 200 million BTU's per capita.¹ Of California's total energy usage, the breakdown by sector is 40 percent transportation, 23 percent industrial, 19 percent commercial, and 18 percent residential.² Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use.

While BTUs measure total energy usage, electricity is generally measured in kilowatt-hours (kWh) which is the standard billing unit for energy delivered to consumers by electrical utilities.

¹ U.S. Energy Information Administration, California State Profile and Energy Estimates. <https://www.eia.gov/state/print.php?sid=CA>. Accessed December 2019.

² Ibid.

The electricity consumption attributable to Kern County from 2007 to 2018 is shown in Table 3.6-1. As indicated, energy consumption in Kern County varied approximately 29 percent over the last 11 years.

**Table 3.6-1
Electricity Consumption in Kern County 2007 – 2018³**

Year	Electricity Consumption (in millions of kilowatt hours)
2007	17,243
2008	15,450
2009	14,443
2010	14,955
2011	15,953
2012	16,675
2013	15,023
2014	14,295
2015	15,170
2016	16,530
2017	18,440
2018	15,805

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs, mainly located outside the State, and delivered through high-pressure transmission pipelines. The natural gas transportation system is a nationwide network, and, therefore, resource availability is typically not an issue. Natural gas provides almost one-third of the state's total energy requirements and is used in electricity generation, space heating, cooking, water heating, industrial processes, and as a transportation fuel.

Natural gas is provided to the City of Tehachapi by the Southern California Gas Company. The natural gas consumption attributable to Kern County from 2007 to 2018 is provided in Table 3.6-

³ California Energy Commission. Energy Reports. Electricity Consumption by County. <https://ecdms.energy.ca.gov/elecbycounty.aspx>. Accessed December 2019.

2, Natural Gas Consumption in Kern County 2007-2018. Natural gas consumption in Kern County varied 5.8% between 2007 and 2018.

Table 3.6-2
Natural Gas Consumption in Kern County 2007 – 2018⁴

Year	Natural Gas Consumption (in millions of therms)
2007	2,636
2008	2,591
2009	2,497
2010	2,327
2011	2,376
2012	2,326
2013	2,697
2014	2,715
2015	2,762
2016	2,520
2017	2,397
2018	2,427

Transportation Energy

According to the U.S. Energy Administration, transportation accounted for 40 percent of California's total energy consumption in 2014.⁵ In 2018, California consumed 15.5 billion gallons of gasoline and 3.1 billion gallons of diesel fuel.⁶ Petroleum-based fuels currently account for 90% of California's transportation energy sources⁷; however, the state is now working on developing flexible strategies to reduce petroleum use. Accordingly, gasoline consumption in California has declined.

According to the Board of Equalization (BOE), statewide taxable sales figures indicate a total of 15,471 million gallons of gasoline and 1,777 million gallons of diesel fuel were sold in 2018.⁸

⁴ California Energy Commission. Energy Reports. Gas Consumption by County.

<http://www.ecdms.energy.ca.gov/gasbycounty.aspx> Accessed December 2019.

⁵ U.S. Energy Information Administration, California State Profile and Energy Estimates.

<https://www.eia.gov/state/print.php?sid=CA>. Accessed December 2019.

⁶ California Department of Tax and Fee Administration. August 2019 – Motor Vehicle Fuel 10 Year Reports and Taxable Diesel Gallons 10 Year Report. <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm>. Accessed December 2019.

⁷ California Energy Commission. Draft Staff Report. 2017-2018 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program. Page 7. <https://www.energy.ca.gov/2016publications/CEC-600-2016-007/CEC-600-2016-007-SD.pdf>. Accessed December 2019.

⁸ California Energy Commission. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results.

https://www.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html. Accessed December 2019.

Although exact estimates are not available by County, retail fuel outlet survey data indicates Kern County accounted for approximately 2.56 percent and 6.08 percent of total statewide gasoline and diesel sales, respectively, in 2018.

Regulatory Setting

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Energy and Policy Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards.

Energy Independence and Security Act of 2007

This Act set increased Corporate Average Fuel Economy (CAFÉ) standards for motor vehicles and includes the following provisions related to energy efficiency:

- Renewable fuel standards (RFS)
- Appliance and lighting efficiency standards
- Building energy efficiency

This Act requires increasing levels of renewable fuels to replace petroleum. The U.S. EPA is responsible for developing and implementing regulations to ensure transportation fuel sold into the US contains a minimum volume of renewable fuel.

The RFS programs regulations were developed in collaboration with refiners, renewable fuel products, and other stakeholders and were created under the Energy Policy Act of 2005. The RFS program established the first renewable fuel volume mandate in the US. As required under the act, the original RFS program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Act, the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of the nation's renewable fuels sector. The updated program is referred to as RFS2 and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline:

- EISA increase the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- EISA established new categories of renewable fuel and set separate volume requirements for each one; and
- EISA required by the U.S. EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.⁹

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternate energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

Federal Vehicle Standards

In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of carbon dioxide (CO₂) in model year 2025, on an average industry fleetwide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 – 2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

⁹ U.S. EPA. Renewable Fuel Standard Program. Overview for Renewable Fuel Standard. <https://www.epa.gov/renewable-fuel-standard-program/overview-renewable-fuel-standard>. Accessed December 2019.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018-2027 for certain trailers, and model years 2021-2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.¹⁰

In August 2018, The USEPA and NHTSA released a notice of proposed rulemaking called Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). This rule would modify the existing CAFE standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks, and establish new standards covering model years 2021-2026. SAFE standards are expected to uphold model year 2020 standards through 2026.¹¹

State of California

Integrated Energy Policy Report

Senate Bill 138 (Bowen Chapter 568, Statutes of 2002) requires the California Energy Commission to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public and safety (Public Resources Code §25301(a)).

The 2016 Integrated Energy Policy Report¹² (IEPR) was published in February 2017, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2016 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, transportation fuel supply reliability issues, and the California Energy Demand Forecast.

¹⁰ U.S. Department of Transportation. Briefing Room. EPA and DOT Finalize Greenhouse Gas and Fuel Efficiency Standards for Heavy-Duty Trucks. <https://www.transportation.gov/briefing-room/epa-and-dot-finalize-greenhouse-gas-and-fuel-efficiency-standards-heavy-duty-trucks>. Accessed December 2019.

¹¹ U.S. Department of Transportation. SAFE. The Safer Affordable Fuel-Efficient 'SAFE' Vehicles Rule. <https://www.nhtsa.gov/corporate-average-fuel-economy/safe>. Accessed December 2019.

¹² California Energy Commission. 2016 Integrated Energy Policy Report Update. https://www.energy.ca.gov/2016_energypolicy/. Accessed December 2019.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental end energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24)

Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in California. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality.” The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC).

CALGreen contains both mandatory and voluntary measures. For nonresidential land uses, there are 39 mandatory measures including, but not limited to, exterior light pollution reduction, wastewater reduction by 20 percent, and commissioning of projects over 10,000 square feet. Two tiers of voluntary measures apply to nonresidential land uses, for a total of 36 additional elective measures.

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. Starting in 2020, the 2019 standards will improve upon existing standards, focusing on three key areas: proposing new requirements for installation of solar photovoltaics for newly

constructed low-rise residential buildings; updating current ventilation and Indoor Air Quality (IAQ) requirements; and extending Title 24 Part 6 to apply to healthcare facilities. The 2019 Building Energy Efficiency Standards are approximately 53 percent more efficient than the 2016 Title 24 Energy Standards for residential development and approximately 30 percent more efficient for nonresidential development.

Executive Order B-30-15

Executive Order B-30-15, 2030 Carbon Target and Adaptation, issued by Governor Brown in April 2015, set a target of reducing GHG emissions by 40 percent below 1990 levels in 2030. To achieve this ambitious target, Governor Brown identified five key goals for reducing GHG emissions in California through 2030:

- Increase the amount of renewable electricity provided state-wide to 50 percent;
- Double energy efficiency savings achieved in existing buildings and make heating fuels cleaner;
- Reduce petroleum use in cars and trucks by up to 50 percent;
- Reduce emissions of short-lived climate pollutants; and
- Manage farms, rangelands, forests, and wetlands to increasingly store carbon.

Senate Bill (SB) 375 (Sustainable Communities and Climate Protection Act)

In January 2009, California SB 375, known as the Sustainable Communities and Climate Protection Act, went into effect. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce GHG emissions and other air pollutants. SB 375 tasks CARB to set GHG reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In 2010, CARB released the proposed GHG reduction targets for the MPOs. The proposed reduction targets for the Kern COG region were five percent by year 2020 and ten percent by year

2035 through September of 2018, then six percent by 2020 and 13 percent by 2035 beginning in October of 2018.¹³

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. The 2003 Integrated Energy Policy Report recommended accelerating that goal to 20 percent by 2010, and the 2004 Energy Report Update further recommended increasing the target to 33 percent by 2020. The state's Energy Action Plan also supported this goal. In 2006 under Senate Bill 107, California's 20 percent by 2010 RPS goal was codified. The legislation required retail sellers of electricity to increase renewable energy purchases by at least one percent each year with a target of 20 percent renewables by 2010. Publicly owned utilities set their own RPS goals, recognizing the intent of the legislature to attain the 20 percent by 2010 target.

In 2008, Governor Schwarzenegger signed Executive Order S-14-08 requiring that "all retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020." The following year, Executive Order S-21-09 directed CARB to enact regulations to achieve the goal of 33 percent renewables by 2020.

In 2015, Governor Brown signed Senate Bill 350 to codify ambitious climate and clean energy goals. One key provision of SB 350 is for retail sellers and publicly owned utilities to procure "half of the state's electricity from renewable sources by 2030."

The State's RPS program was further strengthened by SB 100 in 2018. SB 100 revised the State's RPS Program to require retail sellers of electricity to serve 50 percent and 60 percent of the total kilowatt-hours sold to retail end-use customers be served by renewable energy sources by 2026 and 2030, respectively, and to require that 100 percent of all electricity supplied come from renewable sources by 2045.

Executive Order B-55-18

In 2018, Governor Brown signed EO B-55-18 to achieve carbon neutrality by moving California to 100 percent clean energy by 2045. This Executive Order also includes specific measures to reduce

¹³ California Air Resources Board. Regional Plan Targets. <https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets>. Accessed December 2019.

GHG emissions via clean transportation, energy efficient buildings, directing cap-and-trade funds to disadvantaged communities, and better management of the state's forest land.

Low Carbon Fuel Standard Regulation

CARB initially approved the Low Carbon Fuel Standard (LCFS) regulation in 2009, identifying it as one of the nine discrete early action measures in the 2008 Scoping Plan to reduce California's GHG emissions. The LCFS regulation defines a Carbon intensity, or "CI," reduction target (or standard) for each year, which the rule refers to as the "compliance schedule." The LCFS regulation requires a reduction of at least 10 percent in the CI of California's transportation fuels by 2020 and maintains that target for all subsequent years.

CARB has begun the rulemaking process for strengthening the compliance target of the LCFS through the year 2030. For a new LCFS target, the preferred scenario in the 2017 Scoping Plan Update identifies an 18 percent reduction in average transportation fuel carbon intensity, compared to a 2010 baseline, by 2030 as one of the primary measures for achieving the state's GHG 2030 target. Achieving the SB 32 reduction goals will require the use of a low carbon transportation fuels portfolio beyond the amount expected to result from the current compliance schedule.¹⁴

Advanced Clean Cars Program

In 2012, CARB approved the Advanced Clean Cars (ACC) Program (formerly known as Pavley II) for model years 2017-2025. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations and the Zero-Emission Vehicle (ZEV) regulation. The program combines the control of smog, soot, and global warming gases with requirements for greater numbers of zero-emission vehicles into a single package of standards. By 2025, new automobiles under California's Advanced Clean Car program will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

EO B-48-18, issued by Governor Brown in 2018, establishes a target to have five million ZEVs on the road in California by 2030. This Executive Order is supported by the State's 2018 ZEV Action Plan Priorities Update, which expands upon the State's 2016 ZEV Action Plan. While the 2016

¹⁴ California Air Resources Board. CARB amends Low Carbon Fuel Standard for wider impact. <https://ww2.arb.ca.gov/index.php/news/carb-amends-low-carbon-fuel-standard-wider-impact>. Accessed December 2019.

plan remains in effect, the 2018 update function as an addendum, highlighting the most important actions State agencies are taking in 2018 to implement the directives of EO B-48-18.

Thresholds

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact related to energy if it will:

- Result in a wasteful, inefficient or unnecessary consumption of energy resources;
- Conflict with or obstruct state or local plans.

Impacts and Mitigation Measures

Impact 3.6-1: *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Less Than Significant. Project implementation could increase the demand for electricity and natural gas within the Project area and gasoline consumption in the region during construction and operation of new land use developments.

Short Term Construction

During the seven-year Project construction period, diesel fuel would be required to power off-road heavy construction equipment and trucks. The total construction fuel consumption is calculated as the sum of total estimated fuel consumption for each piece of equipment used in each phase of construction. To calculate total fuel consumption for specific equipment, Section 3.0, Construction Detail, in the CalEEMod Worksheets located in Appendix B provides detailed construction phasing, construction equipment used in each phase, total number of days worked, equipment horsepower, equipment load factor, and equipment quantities based on typical construction equipment and default model assumptions. To estimate fuel consumption from off-road construction equipment, a diesel fuel consumption rate of 0.05 gallons/horsepower-hour¹⁵ was utilized.

On-road vehicles for construction workers, vendors, and haulers would require fuel for travel to and from the site during construction. As detailed in Table 3.6-3, it is estimated that 21,844 gallons

¹⁵ Fuel use factor of 0.05 gallons/horsepower-hour is based on South Coast Air Quality Management district CEQA Air Quality Handbook, Table A9-3E.

of diesel gasoline would be consumed by off-road vehicles during construction for an average of approximately 4,368 gallons per phase.¹⁶

Table 3.6-3
Construction On and Off-Road Fuel Consumption

Phase	Fuel Consumption from Off-Road Construction Equipment (Gallons)	Fuel Consumption from On-Road Construction Vehicle Trips (Gallons)	Total (Gallons)
I	1,741.3	2,627.5	4,368.8
II	1,741.3	2,627.5	4,368.8
III	1,741.3	2,627.5	4,368.8
IV	1,741.3	2,627.5	4,368.8
V	1,741.3	2,627.5	4,368.8
Total	8,706.5	13,137.5	21,844

There are no unusual project characteristics that would necessitate the use of construction equipment that would be less-energy efficient than at comparable construction sites in other parts of the state. Therefore, it is expected that construction fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region. Furthermore, mitigation measure AIR-4 would be implemented, which includes idling restrictions to reduce potential air quality impacts and would have the co-benefit of reducing fuel consumption.

Long-Term Operations

Transportation Energy Demand

Table 3.6-4 provides an estimate of the daily and annual fuel consumed by vehicles traveling to and from the proposed Project. These estimates were derived using the same assumptions used in the operational air quality analysis for the proposed Project, as detailed in Section 3.3.

¹⁶ Fuel use factor per U.S. Department of Energy. Alternative Fuels Data Center. Average Fuel Economy of Major Vehicle Categories was utilized. <https://afdc.energy.gov/data/10310>. Accessed December 2019.

Table 3.6-4
Long-Term Operational Vehicle Fuel Consumption

Vehicle Type	Percent of Vehicle Trips	Daily VMT	Average Fuel Economy (miles/gallon)¹⁷	Total Daily Fuel Consumption (gallons)
Passenger Cars	52.68	23,050	23.96	962
Light/Medium Duty Vehicles	37.98	16,620	22.04	742
Heavy Duty Vehicles/Other	9.04	3,955	6.64	596
Motorcycles	0.30	130	43.89	3
Total	100	43,755	--	2,303

As shown above, vehicular fuel consumption is estimated to be 2,303 gallons of fuel per day.

Within a mile radius of the proposed Project site there are several services, such as restaurants, schools, dry cleaning, and the City's downtown area. The proposed Project would constitute development within an established community and would not be opening a new geographical area for development that would draw new trips, or substantially lengthen existing trips. As such, it would be expected that vehicular fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than for any other similar land use activities in the region.

Building Energy Demand

As provided in Tables 3.6-5, the proposed Project is estimated to demand 4,932,181 kilowatt hours of electricity and 14,486,395 thousand of British Thermal Units of natural gas, on an annual basis.¹⁸ As described in Chapter 3.3, Air Quality, solar panels will be installed per the 2019 California Building Code which will greatly reduce the Project's electrical energy demand.

Table 3.6-5
Long-Term Natural Gas and Electricity Usage

Residential Land Use	kBTU/yr of Natural Gas	kWh/yr of Electricity (with no solar panel installation)
Apartments (Low Rise)	366,964	101,994
Apartments (Mid Rise)	187,428	55,356.2

¹⁷ U.S Department of Energy. Alternative Fuels Data Center. Average Fuel Economy of Major Vehicle Categories. <https://afdc.energy.gov/data/10310>. Accessed December 2019.

¹⁸ As calculated in Tables 5.2 and 5.3 for Phases I through V of the CalEEMod Worksheets located in Appendix B.

City Park	0	0
Condo/Townhouse	412,857	184,531
Single Family Housing	1,930,030	644,555
Total Per Phase	2,897,279	986,436.2
Total Demand (for 5 Phases)	14,486,395	4,932,181

Buildings and infrastructure constructed pursuant to the proposed Project would comply with the versions of CCR Titles 20 and 24, including CalGreen, that are applicable at the time that building permits are issued. Current state regulatory requirements for new building construction contained in the 2019 CalGreen and Title 24 would increase energy efficiency and reduce energy demand in comparison to existing residential structures, and therefore, would reduce actual environmental effects associated with energy use from the proposed Project. It would be expected that building energy consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than for any other similar residential buildings in the area.

For these reasons, the Project would not result in the unnecessary, inefficient, or wasteful use of energy resources. This impact would be *less than significant*.

Mitigation Measures

None Required.

Impact 3.6-2: *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Less Than Significant. The proposed Project would not conflict with the energy objectives of the General Plan, or state or federal regulations. As discussed in Impact 3.6-1, the proposed Project would constitute development within an established community and would not be opening a new geographical area for development that would draw new trips, or substantially lengthen existing trips. The proposed Project would be well positioned to accommodate existing population and reduce VMT due to its proximity to services. The proposed Project would not impede the City's bicycle and pedestrian network and the proposed Project would include onsite and offsite improvements to pedestrian infrastructure (sidewalks).

The proposed Project would comply with the versions of CCR Titles 20 and 24, including CALGreen, that are applicable at the time that building permits are issued and with all applicable City measures.

For the above reasons, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The impact is *less than significant*.

Mitigation Measures

None Required.

Cumulative Impacts

Less Than Cumulatively Considerable. Development associated with buildout of the proposed Project would require the consumption of electricity, natural gas, and vehicle fuel resources to accommodate growth. As discussed above, new development and land use turnover would be required to comply with statewide mandatory energy requirements outlined in Title 24, Part 6, of the California Code of Regulations (the CALGreen Code), which could decrease estimated electricity and natural gas consumption in new and retrofitted structures. Furthermore, energy consumed by development in the Project area would continue to be subject to the regulations described in the Regulatory Setting of this Section. For these reasons, the electrical and natural gas energy that would be consumed by the Project is not considered unnecessary, inefficient, or wasteful. Impacts are *less than cumulatively considerable*.

3.8 Greenhouse Gas Emissions

This section discusses regional greenhouse gas (GHG) emissions and climate change impacts that could result from implementation of the proposed Project. This section provides a background discussion of greenhouse gases and effects of global climate change and organized with an existing setting, regulatory setting, and impact analysis. The information and analysis compiled in this Section is based on the Air Quality Impact Analysis prepared for this Project by Insight Environmental Consultants (see Appendix B).

Global Climate Change

“Global climate change” refers to change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms, lasting for decades or longer. The term “global climate change” is often used interchangeably with the term “global warming,” but “global climate change” is preferred by some scientists and policy makers to “global warming” because it helps convey the notion that in addition to rising temperatures, other changes in global climate may occur. Climate change may result from the following influences:

- Natural factors, such as changes in the sun’s intensity or slow changes in the Earth’s orbit around the sun;
- Natural processes within the climate system (e.g., changes in ocean circulation); and/or
- Human activities that change the atmosphere’s composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, and desertification).

As determined from worldwide meteorological measurements between 1990 and 2005, the primary observed effect of global climate change has been a rise in the average global tropospheric temperature of 0.36-degree Fahrenheit (°F) per decade. Climate change modeling shows that further warming could occur, which could induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of California could include higher sea levels, drier or wetter weather, changes in ocean salinity, changes in wind patterns, or more energetic aspects of extreme weather (e.g., droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones). Specific effects from climate change in California may include a decline in the Sierra Nevada snowpack, erosion of California’s coastline, and seawater intrusion in the Sacramento-San Joaquin River Delta.

Human activities, including fossil fuel combustion and land use changes, release carbon dioxide (CO₂) and other compounds cumulatively termed greenhouse gases. GHGs are effective at trapping radiation that would otherwise escape the atmosphere. This trapped radiation warms the atmosphere, the oceans, and the earth's surface.¹ Many scientists believe that most of the warming observed over the last 50 years is attributable to human activities.² The increased amount of CO₂ and other GHGs in the atmosphere is the alleged primary cause of human-induced warming.

GHGs are present in the atmosphere naturally, released by natural sources, or formed from secondary reactions taking place in the atmosphere. They include CO₂, methane (CH₄), nitrous oxide (N₂O), and O₃. In the last 200 years, substantial quantities of GHGs have been released into the atmosphere, primarily from fossil fuel combustion. These human-induced emissions are increasing GHG concentrations in the atmosphere, therefore enhancing the natural greenhouse effect. The GHGs resulting from human activity are believed to be causing global climate change. While human-made GHGs include CO₂, CH₄, and N₂O, some (like chlorofluorocarbons [CFCs]) are completely new to the atmosphere. GHGs vary considerably in terms of Global Warming Potential (GWP), the comparative ability of each GHG to trap heat in the atmosphere. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO₂ equivalents" (CO₂e).

Natural sources of CO₂ include the respiration (breathing) of humans and animals and evaporation from the oceans. Together, these natural sources release approximately 150 billion metric tons of CO₂ each year, far outweighing the 7 billion metric tons of GHG emissions from fossil fuel burning, waste incineration, deforestation, cement manufacturing, and other human activity. Nevertheless, natural GHG removal processes such as photosynthesis cannot keep pace with the additional output of CO₂ from human activities. Consequently, GHGs are building up in the atmosphere.³

¹ Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 3.8.

² Ibid.

³ Ibid. Page 3.9

Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources of CH₄ production include wetlands, termites, and oceans. Human activity accounts for the majority of the approximately 500 million metric tons of CH₄ emitted annually. These anthropogenic sources include the mining and burning of fossil fuels; digestive processes in ruminant livestock such as cattle; rice cultivation; and the decomposition of waste in landfills. The major removal process for atmospheric CH₄, the chemical breakdown in the atmosphere, cannot keep pace with source emissions; therefore, CH₄ concentrations in the atmosphere are rising.

Worldwide emissions of GHGs in 2008 were 30.1 billion metric tons of CO₂e and have increased considerably since that time.⁴ It is important to note that the global emissions inventory data are not all from the same year and may vary depending on the source of the data.⁵ Emissions from China, the United States, and the European Union accounted for approximately 54% of total global GHG emissions in 2014. The United States was the number two producer of GHG emissions, behind China. The primary GHG emitted by human activities was CO₂, representing approximately 76% of total global GHG emissions.⁶

In 2017, the United States emitted approximately 6.5 million metric tons of CO₂e. Of the six major sectors nationwide (electric power industry, transportation, industry, agriculture, commercial, and residential), the electric power industry and transportation sectors combined account for approximately 57% of the GHG emissions; the majority of the electrical power industry and all of the transportation emissions are generated from direct fossil fuel combustion. Between 1990 and 2017, total United States GHG emissions rose approximately 1.3%.⁷

Worldwide, energy-related CO₂ emissions are expected to increase at an average rate of 0.6% annually between 2018 and 2050, compared with the average growth rate of 1.8% per year from 1990 to 2018. Much of the increase in these emissions is expected to occur in the developing world where emerging economies, such as China and India, fuel economic development with fossil fuel energy. Developing countries' emissions are expected to grow above the world average at a rate of approximately 1% annually between 2018 and 2050 and surpass emissions of industrialized countries by 2025.⁸

⁴ Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 3.9.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 3.9.

CARB is responsible for developing and maintaining the California GHG emissions inventory. This inventory estimates the amount of GHGs emitted into and removed from the atmosphere by human activities within the state of California and supports the Assembly Bill (AB) 32 Climate Change Program. CARB's current GHG emission inventory covers the years 2000 through 2017 and is based on fuel use, equipment activity, industrial processes, and other relevant data (e.g., housing, landfill activity, and agricultural lands).

In 2017, emissions from statewide emitting activities were 424 million metric tons of CO₂ equivalent (MMT CO₂e), which is 5 MMT CO₂e lower than 2016 levels. 2017 emissions have decreased by 14% since peak levels in 2004 and are 7 MMT Co₂e below the 1990 emissions level and the State's 2020 GHG Limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 tonnes per person to 10.7 tonnes per person in 2017, a 24% decrease.⁹

CARB estimates that transportation was the source of approximately 40% of California's GHG emissions in 2017, followed by electricity generation at 15%. Other sources of GHG emissions were industrial sources at 21%, residential plus commercial activities at 10%, and agriculture at 8%.¹⁰

CARB has projected the estimated statewide GHG emissions for the year 2020, which represent the emissions that would be expected to occur with reductions anticipated from Pavley I and the Renewables Electricity Standard (30 MMT CO₂e total), will be 509 MMT of CO₂e.¹¹ GHG emissions from the transportation and electricity sectors as a whole are expected to increase at approximately 36% and 20% of total CO₂e emissions, respectively, as compared to 2009. The industrial sector consists of large stationary sources of GHG emissions and the percentage of the total 2020 emissions is projected to be 18% of total CO₂e emissions. The remaining sources of GHG emissions in 2020 are high global warming potential gases at 6%, residential and commercial activities at 10%, agriculture at 7%, and recycling and waste at 2%.

Effects of Global Climate Change

Changes in the global climate are assessed using historical records of temperature changes that have occurred in the past. Climate change scientists use this temperature data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from past climate changes in rate and magnitude.

⁹ Ibid. Page 3.10

¹⁰ Ibid.

¹¹ Ibid.

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fifth Assessment Report, the IPCC predicted that the global mean temperature change from 1990 to 2100, could range from 1.1 degree Celsius (°C) to 6.4 °C (8 to 10.4 °Fahrenheit).¹² Global average temperatures and sea levels are expected to rise under all scenarios.¹³ The IPCC concluded that global climate change was largely the result of human activity, mainly the burning of fossil fuels. However, the scientific literature is not consistent regarding many of the aspects of climate change, the actual temperature changes during the 20th century, and contributions from human versus non-human activities.

Effects from global climate change may arise from temperature increases, climate sensitive diseases, extreme weather events, and degradation of air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems. Heat-related problems include heat rash and heat stroke, drought, etc. In addition, climate-sensitive diseases may increase, such as those spread by mosquitoes and other disease-carrying insects. Such diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture. Global warming may also contribute to air quality problems from increased frequency of smog and particulate air pollution.

According to the 2006 California Climate Action Team (CAT) Report, several climate change effects can be expected in California over the course of the next century.¹⁴ These are based on trends established by the IPCC and are summarized below.

- A diminishing Sierra snowpack declining by 70% to 90%, threatening the state's water supply.
- A rise in sea levels, resulting in the displacement of coastal businesses and residences. During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Sea level rises of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and

¹² Appendix B. Air Quality Impact Analysis for the Sage Ranch Residential Project. Page 3.10.

¹³ Ibid.

¹⁴ Ibid. Page 3.11

natural habitats. (Note: This condition would not affect the Proposed Project area as it is a significant distance away from coastal areas.)

- An increase in temperature and extreme weather events. Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- Increased risk of large wildfires if rain increases as temperatures rise. Wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30% toward the end of the 21st century because more winter rain will stimulate the growth of more plant fuel available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90% more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- Increasing temperatures from 8 to 10.4 °F under the higher emission scenarios, leading to a 25% to 35% increase in the number of days that ozone pollution levels are exceeded in most urban areas (see below). Increased vulnerability of forests due to forest fires, pest infestation, and increased temperatures.
- Reductions in the quality and quantity of certain agricultural products. The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- Exacerbation of air quality problems. If temperatures rise to the medium warming range, there could be 75 to 85% more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- A decrease in the health and productivity of California's forests. Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.
- Increased electricity demand, particularly in the hot summer months.
- Increased ground-level ozone formation due to higher reaction rates of ozone precursors.

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. In general, increases in the ambient global temperature as a result of increased GHGs are

anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

Regulatory Setting

Intergovernmental Panel on Climate Change (IPCC)

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United Nations Framework Convention on Climate Change established an agreement with the goal of controlling GHG emissions, including methane. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs. Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete O₃ in the stratosphere (chlorofluorocarbons [CFCs], halons, carbon tetrachloride, and methyl chloroform) were phased out by 2000 (methyl chloroform was phased out by 2005).

Federal Climate Change Policy

According to the EPA, “the United States government has established a comprehensive policy to address climate change” that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, “the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science.” The federal government’s goal is to reduce the greenhouse gas (GHG) intensity (a measurement of GHG emissions per unit of economic activity) of the American economy by 18 percent over the 10-year period from 2002 to 2012. In addition, the EPA administers multiple programs that encourage voluntary GHG reductions, including “ENERGY STAR”, “Climate Leaders”, and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

California Global Warming Solutions Act of 2006

On September 27, 2006, Assembly Bill 32 (AB32), the California Global Warming Solutions Act of 2006 (the Act) was enacted by the State of California. The legislature stated, “Global warming poses a serious threat to the economic well-being, public health, natural resources, and the

environment of California.” The Act caps California’s GHG emissions at 1990 levels by 2020. The Act defines GHG emissions as all of the following gases: carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. This agreement represents the first enforceable statewide program in the U.S. to cap all GHG emissions from major industries that includes penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB32 lays out a program to inventory and reduce GHG emissions in California and from power generation facilities located outside the state that serve California residents and businesses.

AB 32

AB32 charges CARB with responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. CARB has adopted a list of discrete early action measures that can be implemented to reduce GHG emissions. CARB has defined the 1990 baseline emissions for California and has adopted that baseline as the 2020 statewide emissions cap. CARB is conducting rulemaking for reducing GHG emissions to achieve the emissions cap by 2020. In designing emission reduction measures, CARB must aim to minimize costs, maximize benefits, improve and modernize California’s energy infrastructure, maintain electric system reliability, maximize additional environmental and economic co-benefits for California, and complement the state’s efforts to improve air quality.

California Supreme Court Center for Biological v. California Department of Fish and Wildlife

The California Supreme Court’s most recent CEQA decision on the Newhall Ranch development case, *Center for Biological v. California Department of Fish and Wildlife* (November 30, 2015, Case No. 217763), determined that the project’s Environmental Impact Report (EIR) did not substantiate the conclusion that the GHG cumulative impacts would be less than significant. The EIR determined that the Newhall Ranch development project would reduce GHG emissions by 31 percent from business as usual (BAU). This reduction was compared to the California’s target of reducing GHG emissions statewide by 29 percent from business as usual. The Court determined that “the EIR’s deficiency stems from taking a quantitative comparison method developed by the Scoping Plan as a measure of the greenhouse gas reduction effort required by the state as a whole, and attempting to use that method, without adjustments, for a purpose very different from its original design.” In the Court’s final ruling it offered suggestions that were deemed appropriate use of the BAU methodology:

1. Lead agencies can use the comparison to BAU methodology if they determine what reduction a particular project must achieve in order to comply with statewide goals,

2. Project design features that comply with regulations to reduce emissions may demonstrate that those components of emissions are less than significant, and
3. Lead agencies could also demonstrate compliance with locally adopted climate plans or could apply specific numerical thresholds developed by some local agencies.

Eastern Kern Air Pollution Control District

The Eastern Kern Air Pollution Control District (EKAPCD) has developed a specific numerical threshold to determine significance of a proposed project. According to the Court's ruling this numerical threshold can be used to demonstrate compliance. This threshold is applied to the subject Project in order to determine significance. Therefore, the GHG analysis for this Project follows the suggestions from the Court's ruling on the Newhall Ranch development project in order to determine significance.

Thresholds of Significance

On March 8, 2012, the EKAPCD adopted *Addendum to CEQA Guidelines Addressing GHG Emission Impacts For Stationary Source Projects When Serving As Lead CEQA Agency*; which outlined the EKAPCD's Project-Specific CEQA significance thresholds for GHG emissions.¹⁵

If project is exempt from CEQA due to either a statutory or categorical exemption, no further analysis under CEQA is required. Project-Specific GHG Emissions must be quantified if the project is not exempt from CEQA. Project is considered to have a less than significant or cumulatively considerable impact on GHG emissions if it meets one of the following conditions:

1. Project-Specific GHG emissions are less than 25,000 tons per year (tpy);
2. Project demonstrates to EKAPCD that it is in compliance with state GHG reduction plan such as AB 32 or future federal GHG reduction plan if it is more stringent than state plan;
3. Project GHG emissions will be mitigated to a less than significant impact if GHGs can be reduced by at least 20% below Business-As-Usual (BAU) through implementation of one or more of the following strategies:

¹⁵ Eastern Kern Air Pollution Control District (EKAPCD). 2012. District Policy, "Addendum to CEQA Guidelines Addressing GHG Emission Impacts from Stationary Source Projects When Serving As Lead CEQA Agency." March 8, 2012.

- a) Compliance with a Best Performance Standard (BPS) as set forth in Section VI of this Policy;
- b) Compliance with GHG Offset as detailed in Section VI of this Policy;
- c) Compliance with an Alternative GHG Reduction Strategy as discussed in Section VII of this Policy.

If none of the above is met, the project will be deemed significant and an EIR will be required. For this particular project, an EIR is being prepared regardless of these thresholds and therefore, this analysis is included herein.

Impacts and Mitigation Measures

Impact 3.8-1: *Exceed EKAPCD's GHG emissions threshold, be in compliance with any state reduction plan, or reduce emissions by 20% by implementing BAU?*

Less Than Significant. The proposed Project's construction and operational GHG emissions were estimated using the CalEEMod program (version 2016.3.2), EMFAC 2014, and the California Climate Action Registry General Reporting Protocol (Version 3.1). These emissions are summarized in Table 3.8-1 and can be found in Appendix B.

**Table 3.8-1
Estimated Annual GHG Emissions (MT/Year)**

Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction Emissions				
2020	470.49	0.09	0.00	472.81
2021	465.88	0.09	0.00	468.16
2022	460.81	0.09	0.00	463.07
2023	457.56	0.09	0.00	459.76
2024	456.38	0.09	0.00	458.59
2025	451.52	0.09	0.00	453.70
2026	448.54	0.09	0.00	450.73
Operational Emissions				
Phases 1-7	8,032.62	12.52	0.06	8,363.31
<i>Annualized Construction Emissions*</i>	<i>107.04</i>	<i>0.02</i>	<i>0.00</i>	<i>107.56</i>
Project Emissions	8,139.66	12.54	0.06	8,471.87
EKACPD's Significance Threshold	-	-	-	25,000
Significance Threshold Exceeded?	-	-	-	NO
<i>Notes: 0.00 could represent <0.00</i>				
<i>*Per South Coast AQMD's Methodology: Construction emissions are annualized over a 30 year period.</i>				

The proposed Project will not result in the emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), or sulfur hexafluoride (SF₆), the other gases identified as GHG in AB32. The proposed Project will be subject to any regulations developed under AB32 as determined by CARB. As demonstrated in Table 3.8-1 and in accordance with EKAPCD's GHG Policy in which projects with GHG emissions less than 25,000 tons per year are considered less than significant, the Project would be considered to have a *less than significant* impact.

Mitigation Measures:

None Required.

3.10 Hydrology and Water Quality

This section of the DEIR identifies potential impacts of the proposed Project pertaining to hydrology, water supply and water quality. To assist in evaluation of this environmental impact, a Water Supply Assessment was prepared and is included as Appendix D. In addition, a Drainage and Detention Analysis was prepared (Appendix E). Two IS/NOP comment letters were received pertaining to this topic (See Appendix A). The Tehachapi-Cummings County Water District commented that a Water Supply Assessment should be prepared for the Project. The State Water Resources Control Board commented that the City will need to demonstrate enough water source capacity to support the Project and that an amended permit may be needed from the Water Board. These two comments have been addressed in the analysis herein.

Environmental Setting

Water System and Supply

The Tehachapi Basin (Basin) provides the main source of water supply for the City of Tehachapi and surrounding communities. The Tehachapi-Cummings County Water District (TCCWD) serves as Watermaster over the Basin. Tehachapi is currently allocated 1,847 acre-feet per year (afy), approximately 90 percent of its average demand of 2,017 afy.¹ The City makes up the shortfall by acquiring water from the exchange pool, in which water rights holders are able to exchange or sell portions of their allocation. Major rights holders in addition to Tehachapi include the Golden Hills Community Services District (CSD), industrial and agricultural users, with agricultural users representing the largest number of participants in the exchange pool.²

Total groundwater storage of the Basin is estimated at 225,000 af (based on an estimated basin volume of 3,250,000 af and a specific yield of 7 percent).³ According to the TCCWD, the Basin's safe yield is 5,500 af annually.⁴

¹ Based on the City's 10-year average (communication with Public Works Department Sept. 2019).

² Tehachapi General Plan EIR, page 4.14.1-1.

³ Tehachapi Valley West Groundwater Bulletin: CA Groundwater Bulletin 118

⁴ <http://tccwd.com/ground-water-managment/>, Accessed July 2016.

The City's water service area covers approximately 4,800 acres and operates six wells serving five pressure zones.⁵ The City water service area includes a variety of residential, commercial, governmental, institutional, and industrial water users. Water is distributed via a City-maintained system of 2-inch through 16-inch mainline piping. All of the potable domestic water is currently derived from groundwater wells.

Regional Watershed

The principal drainage courses in the Tehachapi Valley are Tehachapi Creek, which flows west to the San Joaquin Valley, and Cache Creek, which flows east to the Mojave Desert. Proctor Dry Lake also collects surface drainage that flows eastward. The majority of the stream flow coming into Tehachapi Valley percolates through streambeds and does not exit the valley via stream flow. Any stream flow that is lost from the basin is generally through surface water outflow in Tehachapi Creek, through evaporation from Proctor Dry Lake and in very wet years through surface water outflow to Cache Creek.

The Tehachapi basin is divided into two sub-basins: Tehachapi Valley East and Tehachapi Valley West. Immediately to the west is Brite Basin, a natural sink where several small streams that drain the surrounding valley walls disappear into the ground, mostly in the vicinity of Brite Lake. This lake is one of the principal recharge sites for the Tehachapi Groundwater Basin that underlies the Tehachapi Basin and Brite Basin. The other important recharge area is Antelope Reservoir, south of Highline Road. Many smaller stormwater retention basins throughout the City also act as groundwater recharge facilities.⁶

Water Quality

Groundwater quality in the Tehachapi Valley Basin is generally good. There is historic reported contamination within the watershed; however, the nitrate levels in the Mojave and Dennison wells are below contamination standards. Potential sources of nitrates include historic nitrate based agricultural fertilizer application and wastewater disposal.⁷ Based on the City's Annual Water Quality Report (2015), none of the City's active wells had contaminants above the

⁵ Regional Urban Water Management Plan – 2015, page 4-2.

⁶ Tehachapi General Plan EIR, page 4.8-1.

⁷ Ibid, page 4.8-2.

Maximum Contaminate Level (the highest level of a contaminant that is allowed in drinking water).

Flooding

Flooding within the City of Tehachapi primarily results from the overflow of Blackburn Creek and Antelope Creek across agricultural land and into the City of Tehachapi. Flooding from Blackburn Creek primarily occurs along the north side of SR-58 in the Capital Hills area, while flooding from Antelope Creek occurs mainly in the Downtown West and the Central West areas. Existing flood control structures, located south of Highline Road, are Antelope Dam and Blackburn Dam.

The Antelope reservoir has the capacity to contain the flows from a 100-year storm and drains to the west towards Antelope Run. If this capacity is exceeded, a spillway will direct flow to a channel running north-south along Dennison Road. Antelope Run is a large, meandering natural channel that serves as the major drainage channel through the City of Tehachapi.

Blackburn Dam has capacity to retain a 100-year storm event, and if capacity is exceeded, the Blackburn reservoir will flow to the east towards Proctor Lake. Proctor Lake is located at the eastern most side of the basin and is usually dry.⁸

Project Site

The proposed Project site is located in the southeastern area of Tehachapi, southeast of downtown in an area that generally consists of single-family housing, multi-family housing, schools and churches. The site is currently zoned T-4 (General Urban) and is designated by the General Plan as 4B – Southern Neighborhoods. The site is vacant / undeveloped and is generally void of vegetation except for grass/weeds and scrub brush. Existing topography trends approximately 2% north-northwest, which facilitates drainage across the site towards a series of drain inlets running along the south shoulder of Valley Boulevard.

Upon approval, the Project will be required to construct and/or tie into existing City infrastructure for water, sewer and stormdrain. These facilities are located in the adjacent roadways around the Project site.

⁸ Tehachapi General Plan EIR, page 4.8-2.

Regulatory Setting

Federal Agencies and Regulations

Clean Water Act

The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

Federal Emergency Management Agency (FEMA)

The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes.

State Agencies & Regulations

State Water Resources Control Board

The State Water Resources Control Board (SWRCB), located in Sacramento, is the agency with jurisdiction over water quality issues in the State of California. The SWRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the California Water Code), which establishes the legal framework for water quality control activities by the SWRCB. The intent of the Porter-Cologne Act is to regulate factors which may affect the quality of waters of the State to attain the highest quality which is reasonable, considering a full range of demands and values. Much of the implementation of the SWRCB's responsibilities is delegated to its nine Regional Boards. The proposed Project site is located within the Central Valley Region.

California Water Code

The Federal CWA places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, although this does establish certain guidelines for the States to follow in developing their programs and allows the

Environmental Protection Agency to withdraw control from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal CWA. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region the regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

- (a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:
 - (1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.
 - (2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.
 - (3) A person operating, or proposing to construct, an injection well.

- (b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.
- (c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

Water Code section 10910 (SB 610)

Water Code section 10910 (SB 610) requires a water supply assessment to evaluate whether total projected water supplies will meet the projected water demand for certain development projects that are otherwise subject to CEQA review. Existing law identifies those projects as (a) a residential development of more than 500 dwelling units; (b) a shopping center or business employing more than 1,000 persons or having more than 500,000 square feet of floor space; (c) a commercial office building employing more than 1,000 persons or having more than 250,000 square feet; (d) a hotel or motel with more than 500 rooms; (e) an industrial or manufacturing establishment housing more than 1,000 persons or having more than 650,000 square feet or 40 acres; (f) a mixed use project containing any of the foregoing; or (g) any other project that would have a water demand at least equal to a 500 dwelling unit project. The proposed project would be subject to the provision of Water Code section 10910 (SB 610) because it exceeds 500 dwelling units. Refer to Impact Section 3.10-2 herein for the discussion pertaining to the Water Supply Assessment that was prepared for the Project.

Regional Water Quality Board

The Regional Water Quality Control Board (RWQCB) administers the National Pollutant Discharge Elimination System (NPDES) storm water-permitting program in the Central Valley region, including Tehachapi. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). The General Construction Permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The plan will include specifications for Best Management Practices (BMPs) that will be implemented during proposed Project construction to control degradation of surface water by preventing the potential erosion of sediments or discharge of pollutants from the construction area. The General Construction Permit program was established by the RWQCB for the specific purpose of reducing impacts to surface waters that may occur due to construction activities. BMPs have been established by the RWQCB in the California Storm Water Best Management Practice Handbook (2003), and are recognized as effectively reducing degradation of surface waters to an

acceptable level. Additionally, the SWPPP will describe measures to prevent or control runoff degradation after construction is complete, and identify a plan to inspect and maintain these facilities or project elements.

Local Regulations

Kern County Multi-Hazard Mitigation Plan

In 2005, Kern County adopted a multi-hazard mitigation plan to reduce or eliminate long-term risk to people and property from natural hazards and their effects in the County. The plan puts forth several mitigation goals and objectives that are based on the results of a risk assessment. The plan includes specific recommendations for actions that can mitigate future disaster losses. The plan also includes a review of the County's current capabilities to reduce hazard impacts. The multi-jurisdictional plan covers the entire County, including all incorporated municipalities.

Tehachapi General Plan Policies

Sustainable Infrastructure Element

Watershed and Water Supply

Objective 1 Protect the overall health of the watershed.

- | | |
|------------|---|
| Policy SI1 | Protect stream corridors and recharge areas from development. |
| Policy SI2 | Locate and map all aquifer recharge locations. |
| Policy SI3 | Improve quality of urban stormwater runoff before discharging to water body or infiltration into aquifer. |
| Policy SI4 | Incorporate low impact design stormwater best management practices (BMPs). |

Objective 2 Reduce discharge volumes.

- | | |
|------------|--|
| Policy SI5 | Reuse stormwater flows on site. |
| Policy SI6 | Where soils allow for infiltration, promote infiltration into groundwater basin. |
| Policy SI7 | Reduce imperviousness. |
| Policy SI8 | Slow stormwater runoff through low impact design BMPs. |

Policy SI9 Naturalize channels whenever possible to maximize recharge opportunities.

Policy SI10 Discourage large scale retention basins in favor of a decentralized approach, accommodating as much runoff on site as possible to minimize standing water, maximize infiltration, and improve aesthetics. Vegetated BMPs should be landscaped with native, drought tolerant plantings which conserve water and are cost effective.

Objective 3 Protect and conserve groundwater resources.

Policy SI11 Develop an Urban Water Management Plan in accordance with state requirements.

Policy SI12 Continue to perform Water Source Assessments.

Policy SI13 Require new, high consuming users to secure an alternative water source other than groundwater.

Policy SI14 Reuse stormwater for on-site irrigation.

Policy SI15 Provide incentives for disconnecting downspouts.

Policy SI16 Support the development of future sources of water, including recycled water or TCCWD water for common area landscape irrigation.

Policy SI17 Require new development to contribute to the cost of upgrading the wastewater treatment plant to tertiary level.

Policy SI18 Require new development outside of the adjudicated groundwater basin to identify its source of water.

Policy SI19 Avoid potential contaminants near vulnerable wells.

Policy SI20 New developments should utilize public water and sewer systems.

Utility Infrastructure

Objective 2 Incorporate low impact development BMP's at all scales of the community.

Policy SI24 Use low impact development BMP's such as the following to address stormwater and improve water quality.

- a. Decentralize stormwater basins, accommodating as much runoff on-site as possible.
- b. Improve surface water quality through increased use of bioretention basins and infiltration measures where possible.
- c. Require that 5% of all impervious surfaces will function as on-site bioretention or infiltration.
- d. Convey stormwater through natural courses whenever possible rather than through pipes.
- e. Encourage disconnection of downspouts from storm drain system.
- f. Encourage stormwater reuse.
- g. Combine open space areas with stormwater management wherever possible.

Community Safety Element

Objective 2 Promote aquifer recharge and maintain soil quality.

Policy CS5 Wherever possible and as feasible, incorporate permeable pavement, turf block, decomposed granite, grasscrete or similar permeable surfaces rather than conventional, impervious pavement.

Objective 5 Avoid new development in designated floodplains.

Policy CS15 Require new development within the 100-year floodplain to implement measures as identified in the Flood Plain Ordinance, to protect structures from 100-year flood hazards (e.g., by raising the finished floor elevation outside the floodplain).

Policy CS16 Prohibit grading for vehicle access and parking or operation of vehicles within any floodway.

Policy CS17 In coordination with the Public Realm Element, promote a multiuse concept for flood plains, flood-related facilities, and waterways, including, where appropriate, the following uses: flood control, groundwater recharge, open space, nature study, habitat preservation, pedestrian, equestrian, and bicycle circulation, and outdoor sports, and recreation.

- Policy CS18 As feasible, and in response to the intended physical context, maintain or return to the natural condition of waterways and flood plains to ensure adequate groundwater recharge and water quality, preservation of habitat, and access to mineral resources.
- Policy CS19 Coordinate with FEMA, the U.S. Army Corps of Engineers and Kern County throughout construction, mitigation, and operation of the various components/projects that will directly affect Tehachapi and its Sphere of Influence.
- Policy CS20 Coordinate with all public and private agencies involved in flood control to ensure that improvements do not disrupt environmentally sensitive areas.

Methodology

The analysis considered current conditions of the Project site and applicable laws, regulations and guidelines pertaining to hydrology and water quality. Various databases, planning documents (including the Regional Urban Water Management Plan), and maps were reviewed to assist in the environmental evaluation. Specific references are noted in the text. In addition, a Water Supply Assessment, which calculated projected water demands, was prepared and is included as Appendix D. In addition, a Drainage and Detention Analysis was prepared (Appendix E).

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- 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 offsite;

- 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?
- In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?
 - Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impacts and Mitigation Measures

Impact 3.10-1: *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Less Than Significant With Mitigation. The Project has the potential to impact water quality standards and/or waste discharge requirements during construction (temporary impacts) and operation (polluted stormwater runoff due to an increase in impervious surfaces). Impacts are discussed below. Please also refer to Impact 3.10-3 within this Section for the analysis pertaining to the Project drainage/detention design.

Construction

Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

Three general sources of potential short-term construction-related stormwater pollution associated with the proposed Project are: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment. Generally, routine safety precautions for handling and storing construction materials may effectively mitigate the potential pollution of stormwater by these materials. These same types of common sense, “good housekeeping”

procedures can be extended to non-hazardous stormwater pollutants such as sawdust and other solid wastes.

Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other fluids on the construction site are also common sources of stormwater pollution and soil contamination. In addition, grading activities can greatly increase erosion processes. Two general strategies are recommended to prevent construction silt from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed. Secondly, the area should be secured to control offsite migration of pollutants. These best management practices (BMPs) would be required in the Storm Water Pollution Prevention Plan (SWPPP) to be prepared prior to commencement of Project construction activities. When properly designed and implemented, these “good-housekeeping” practices are expected to reduce short-term construction-related impacts to less than significant.

In accordance with the NPDES Stormwater Program, and as described in the Initial Study Section 3.7 - Geology and Soils, the Project will be required to comply with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are an existing regulatory requirement. Implementation of Mitigation Measure HYD - 1 would ensure that the proposed Project would have a less than significant impact relative to this topic.

Operation

The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with site improvements, including new asphalt, concrete and the proposed structures on site. Urban runoff typically contains oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals) and other household pollutants. Precipitation early in the rain season displaces these pollutants into storm water resulting in high pollutant concentrations in initial wet weather runoff. This initial runoff with peak pollutant levels can be referred to as the "first flush" of storm events.

The proposed Project would install storm water drainage facilities (e.g. storm drainage mechanisms and storm water pipes) that would be in compliance with the City of Tehachapi Development Standards and Kern County Hydrology Manual. See Appendix E for detailed

information regarding Project specific design and stormwater capacity. A drainage and storage plan has been developed that will ensure Project impacts are less than significant.

In accordance with the City's storm water management regulations and NPDES Stormwater Program (General Stormwater Permit), BMPs would be implemented to reduce the amount of pollution in stormwater discharged from the Project site. The management of water quality through the requirement to obtain a General Stormwater Permit and implement appropriate BMPs would ensure that water quality does not degrade to levels that would violate water quality standards. These are existing regulatory requirements.

In addition, the Project will generate typical wastewater (sewer) associated with residential developments and will connect to the City's sewer system. See Section 3.19 – Utilities for a discussion regarding waste discharge requirements, wastewater characteristics and water quality standards pertaining to Project-related wastewater. The Project will not result in a violation of any water quality standards or waste discharge requirements. Therefore, with mitigation, impacts related to this specific resource result in a less than significant impact.

Mitigation Measures:

HYD - 1: Prior to clearing, grading, and disturbances to the ground such as stockpiling, or excavation, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ). The SWPPP shall be designed with Best Management Practices (BMPs) that the RWQCB has deemed as effective at reducing erosion, controlling sediment, and managing runoff. These include: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. Sediment control BMPs, installing silt fences or placing straw wattles below slopes, installing berms and other temporary run-on and runoff diversions. These BMPs are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Final selection of BMPs will be subject to approval by City of Tehachapi and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.

Impact 3.10-2: *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

Less Than Significant With Mitigation. The proposed Project would add demand for water to the City of Tehachapi water system, which is reliant on groundwater to serve its customers. The information herein is based on the Water Supply Assessment that was prepared for the Project (Appendix D).

Assumptions

Project water demand is estimated using information from the City's adopted 2015 Urban Water Management Plan (UWMP), as well as from a more recent water use information from the June 2019 *City of Tehachapi – Water and Sewer Systems Modeling, Planning, and Fee Studies Update* prepared by Michael K. Nunley and Associates. Project water demand is calculated on the following assumptions:

- **Residential:** The Project is proposing 1,000 residential units (see Table 1-2 for the breakdown of housing types).
- **Public Parks:** The Project includes approximately 9 acres of park space distributed among five parks throughout the proposed development. To be conservative, it is assumed that the entire park space acreage will be irrigated lawn and will require approximately 5 acre-feet of water per acre per year. This figure is based on existing water use at Warrior Park (located approximately ¼ mile southwest of the Project site) as well as information pertaining to water requirements for large irrigated lawns such as golf courses in the region.
- **Per Capita Water Use:** The average residential water use in gallons per capita per day (GPCD) for calendar years 2017-2018 in the City of Tehachapi was 118 GPCD per person,⁹ which is based on readings from metered residential customers. This figure will be used to calculate projected water demand from the Project. This is inclusive of water used for outdoor landscaping.
- **Public Areas / Landscaping:** In addition to park space, the outdoor public spaces (excluding backyards) will be maintained by a Homeowners Association (HOA). Although the 118 GPCD estimate includes water used for outdoor landscaping, the Project will not utilize potable water for public outdoor space landscape irrigation (with the

⁹ City of Tehachapi – *Water and Sewer Systems Modeling, Planning and Fee Studies Update*(Memo #3), MKN (June 2019), Page 9, Table 5-2.

exception of private backyards). See *Measures to Reduce Potable Water Use* for more information pertaining to outdoor water use.

- Household Size: According to the 2018 U.S. Census for Tehachapi, the City averages 2.63 persons per household. Although some of the housing products / floor plans proposed by the Project would likely result in fewer than 2.63 persons per residence, the figure is being used to conservatively estimate Project water demand.

Project Water Demand

Based on the above assumptions, Project water demand is calculated as follows:

Residential: 1,000 dwelling units X 2.63 persons per dwelling unit = 2,630 persons X 118 GPCD = 310,340 total gallons per day X 365 days per year = 113,274,100 gallons per year (or **~348 acre/feet/year**)

Parks: 9 acres X 5.0 acre/feet/year = **~45 acre/feet/year**

Total Water Demand: 348 acre/feet/year for Residential
45 acre/feet/year for Parks
393 acre/feet/year

It is anticipated that the Project would require approximately 393 acre/feet/year of water. The next section identifies measures to reduce the amount of potable water required for the Project.

Measures to Reduce Potable Water Use

As identified above, the proposed Project would use approximately 393 AFY of water per year. To offset the amount of potable water being utilized by the Project, the City will require the following measures:

1. The ~9 acres of parks / public space, as well as the outdoor spaces maintained by the HOA will be irrigated with non-potable water from TCCWD. TCCWD provides a reasonably reliable water source either from Basin return flows or from SWP. However, since outdoor landscaping is considered non-critical, the water available for outdoor public spaces may be limited during severe drought conditions.
2. Even though the Project will use non-potable water for outdoor irrigation (with the exception of backyard spaces), the Project is designed to use less water per unit for landscaping than a typical single family residential development. As previously

mentioned, the 118 GPCD estimate includes water used for outdoor irrigation. In California, particularly non-coastal areas, outdoor irrigation can often exceed 50% of total potable water use in residential developments. However, it is anticipated that the proposed Project would use significantly less water for outdoor irrigation because of the relatively small lots with minimal outdoor space available for extensive landscaping. Most of the housing products consist of multi-family patio/court homes, townhomes and apartments (737 units), with the remaining 263 units consisting of single family residential houses on small lots ranging from 4,200 to 5,500 square feet. Because of the relatively small lot sizes and the high number of multi-family housing products, there is limited opportunity for extensive landscaping. In addition, the Project is subject to the Model Water Efficient Landscape Ordinance (MWELo) which encourages more efficient irrigation systems, onsite stormwater capture, limiting turf, etc. By incorporating these factors, it is conservatively estimated that the Project would use at least 20% less than the 118 GPCD estimate for potable water use, or 95 GPCD.

Project Water Demand After Reduction Measures

As identified previously, the Project would use approximately 393 AFY of potable water unmitigated. The measures identified above would result in the following potable water savings:

- 45 acre/feet/year in potable water savings by using non-potable water for parks (based on an estimated 5 acre/feet/year per acre of park space).
- 68 acre/feet/year in potable water savings by using non-potable water for outdoor public areas (not including backyards). This is based on 1,000 dwelling units X 2.63 persons per dwelling unit = 2,630 persons X 95 GPCD = 249,850 total gallons per day X 365 days per year = 91,195,250 gallons per year (or ~280 acre/feet/year). Unmitigated residential water use is 348 acre/feet/year. Mitigated residential water use is 280 acre/feet/year which results in a net savings of 68 acre/feet/year.

This results in a savings of 113 acre/feet/year in potable water use. Total anticipated potable water use from the Project after implementation of reduction measures is approximately **280 acre/feet/year** ($393 - 45 - 68 = 280$).

City-Wide Future Estimated Water Use

The City pumps groundwater from the adjudicated Tehachapi Groundwater Basin and is allowed 1,847 acre-feet of groundwater pumped per year. The City can purchase imported SWP water from TCCWD to meet demands in excess of its groundwater allocation. These supplies are

delivered to the City through groundwater recharge. According to the Greater Tehachapi RUWMP (2015), the projected available water supply (shown in five-year increments) for the City is as follows:

<u>Year</u>	<u>Projected Acre-Feet-Year of Available Water Supply¹⁰</u>
2020	2,242 AFY
2025	2,347 AFY
2030	2,458 AFY
2035	2,575 AFY

More recent information about projected water demand within the City is in the *Water and Sewer Systems Modeling, Planning, and Fee Studies Update, Technical Memorandum #3* prepared by Michael K. Nunley and Associates. The Technical Memorandum provides a summary of projected future water demands associated with 10 years of anticipated development within the City. The proposed Project site was evaluated in the study and assumed the site would be built out with 150 single-family units and 350 multi-family units.¹¹ Based on 2.63 people per unit and 118 GPCD, it was assumed the site would require approximately 174 acre/feet/year. However, as identified herein, the proposed Project would require approximately 280 acre/feet/year of potable water, a difference of 106 acre/feet/year from the projected/estimated water demand for the site. Because the City is restricted in its groundwater extraction, the Applicant will be required to secure some potable water from alternate sources.

Acquisition of Water

The City purchases SWP water from TCCWD to meet its demands in excess of its groundwater allocation and stores at least a 5-year supply. It is anticipated that the City can provide 100% of average supplies in every year.¹² See Section 4.0 for an evaluation of dry-year adequacy.

The Applicant will be required to secure/purchase water rights to serve the Project and/or pay in-lieu fees as determined by the City (for the City to purchase additional water for recharge). As

¹⁰ Greater Tehachapi RUWMP (2015), page 4-15, Table 4:6-9.

¹¹ City of Tehachapi – *Water and Sewer Systems Modeling, Planning and Fee Studies Update* (Memo #3), MKN (June 2019), Page 12, Table 5-5.

¹² Regional Urban Water Management Plan – 2015, page 4-17.

discussed previously, Project water supply will likely occur from a combination of sources including acquisition of non-potable agricultural water (for public space outdoor irrigation), purchase/acquisition of potable water, and payment of City water fees. Each housing unit shall pay the water rights fee in place at the time of permit issuance. Alternatively, at the discretion of the City, the Applicant shall construct an equivalent water savings project that has the effect of reducing current potable water demand elsewhere in the City, as an “in-lieu” method of achieving the water demand requirements of the Project. This shall be made a condition of Project approval.

Mitigation Measures:

HYD - 2: All outdoor public landscaping, with the exception of private back or side yards, shall be irrigated with non-potable water. The Project will be required to secure the non-potable water prior to issuance of building permits.

HYD - 3: The Project proponent shall procure per-unit water rights sufficient to meet the projected water demand as calculated in the Project Water Supply Assessment (Appendix E). Alternatively, the Project shall pay a per-unit water rights entitlement fee in accordance with City ordinances to this same effect. This shall be made a condition of Project approval.

Impact 3.8-3: *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

- i. result in substantial erosion or siltation on- or offsite;*
- 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?*

Less Than Significant. The site is currently a vacant, undeveloped lot that is generally flat and there are no streams, rivers, or other bodies of water that are near the site or that would be impacted by the Project. Since the proposed Project would result in new impervious areas associated with site improvements, including new asphalt, concrete, and the proposed structures on site, the existing drainage pattern at the site would be altered. However, the proposed Project

would install storm water drainage facilities (e.g. storm drainage mechanisms and storm water pipes) that would be in compliance with the City of Tehachapi Development Standards and Kern County Hydrology Manual. See Appendix E for detailed information regarding Project specific drainage design and stormwater capacity. A drainage and storage plan has been developed that will ensure Project impacts are less than significant. This includes construction of an 11-acre-feet capacity detention basin on-site to be located at the northwest corner of the site. The basin is sized based on a 100-year flood event. Stormwater will be collected from the Project to this detention basin and then discharged into the City's existing storm system through a pipeline that will be constructed by the Applicant. The system has been designed so that storm water flow rates do not exceed the City's capacity.

Substantial erosion, siltation or flooding are not expected to occur as the site is developed. In accordance with the NPDES Stormwater Program, and as described in the Initial Study Section 3.7 - Geology and Soils, the Project will be required to comply with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are an existing regulatory requirement. Implementation of Mitigation Measure HYD - 1 would ensure that the proposed Project would have a less than significant impact relative to this topic.

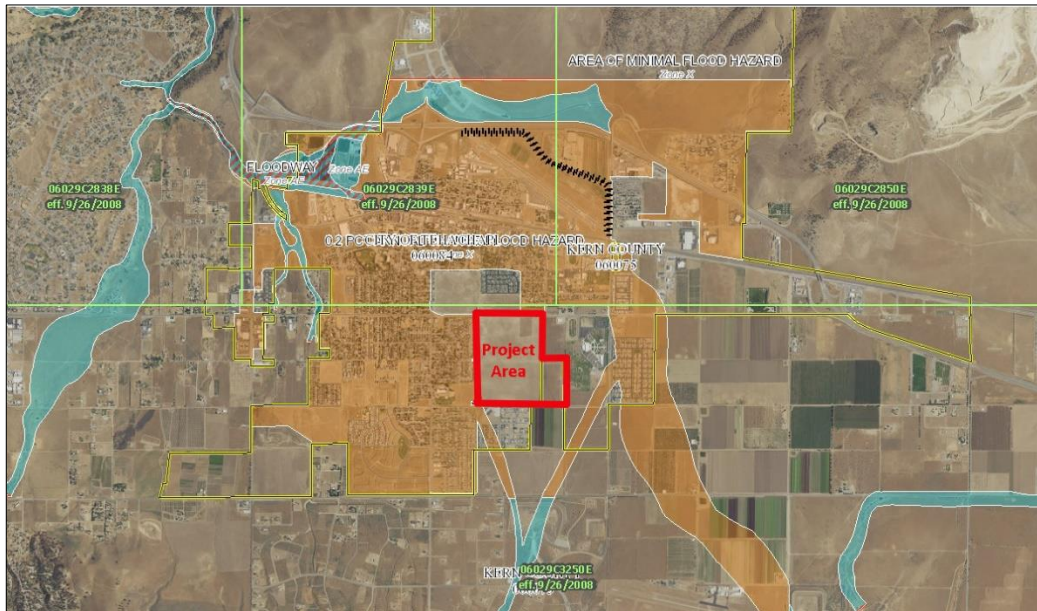
Mitigation Measures: None are required.

Impact 3.10-4: *In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?*

Less Than Significant. The Project is not located within a flood hazard area, tsunami or seiche zone. Figure 3.10-1 shows the Project site outside of any flood zones and thus does not represent a significant risk of flooding to the development. The site is also located more than 100 miles from the nearest ocean that could cause a tsunami and there are no bodies of water near the Project site that would represent any impacts related to seiche zones. Therefore, there is a less than significant impact related to flooding and related hazards.

Figure 3.10-1

FEMA Floodplain Map



Mitigation Measures: None are required.

Impact 3.10-5: *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Less Than Significant. See the response to Impact 3.10-1. The proposed Project would install storm water drainage facilities (e.g. storm drainage mechanisms and storm water pipes) that would be in compliance with the City of Tehachapi Development Standards and Kern County Hydrology Manual. In addition, water quality protection measures are included as mitigation and a stormwater drainage and storage plan has been developed that will ensure Project water quality impacts are less than significant.

The City is located within an adjudicated water basin. Adjudicated area reporting is required by the Sustainable Groundwater Management Act. This includes information pertaining to groundwater elevation, groundwater extraction, surface water supply, total water use, groundwater storage, and other information. The Project would not otherwise conflict with or obstruct a Sustainable Groundwater Management Plan.

Mitigation Measures: None are required.

3.11 Land Use and Planning

This section of the DEIR evaluates the potential environmental effects related to land use and planning associated with implementation of the proposed Project. No comments pertaining to this topic were received during the NOP public review period.

Environmental Setting

Regional Setting

The City of Tehachapi is located in southeastern Kern County, in the middle of the approximately 75-square mile Tehachapi Valley, which is perched above the southeastern terminus of the 300-mile long San Joaquin Valley. Of the five communities in the Tehachapi Valley, Tehachapi is the only incorporated City. The Tehachapi Valley lies between the major agriculture and suburban expansion in the San Joaquin Valley, which includes Bakersfield, to the west, and the high desert region to the east which includes the unincorporated communities of Mojave, and Rosamond and the cities of Ridgecrest, Palmdale and Lancaster.

Kern County encompasses approximately 8,171 square miles and is bordered by Kings and Tulare Counties on the north, San Bernardino County to the east, Los Angeles and Ventura Counties to the south and San Luis Obispo County to the west. Kern County is located in the southern Central Valley. The county extends east beyond the southern slope of the eastern Sierra Nevada Mountain range into the Mojave Desert, and includes parts of the Indian Wells Valley, and the Antelope Valley. From the Sierras the County extends across the floor of the San Joaquin Valley to the eastern edge of the Coastal Range. To the south the county extends over the ridge of the Tehachapi Mountains. Eleven incorporated cities are located in Kern County: Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. Several unincorporated towns are also located in the county.¹

Local Setting

The City's Planning Area, according to the General Plan, encompasses approximately 15,067 acres, of which 5,082 acres are located in the City and 9,978 acres are located in the SOI. The California Correctional Institution (CCI) is located on 1,695 acres approximately four miles west of Tehachapi, and is within the incorporated boundaries. CCI, and its associated acreage, is not considered to be a part of the Planning Area since it is under State control and is geographically

¹ Tehachapi General Plan EIR, page 4.9-1.

separated from the planning area. The Planning Area generally extends from the foothills of the Sierra Nevada Mountain range to the north, Monolith to the east, the foothills of the Tehachapi Mountain range to the south, and the incorporated communities of Golden Hills, Old Towne, Bear Valley Springs and Stallion Springs to the west. The City core is largely built out with retail and commercial businesses. Industrial uses are located north of the downtown core while residential uses are generally located to the south of the downtown core. Regional serving retail uses are located along Tucker Road.²

Project Area Setting

The proposed Project is located on approximately 138-acres and is bounded by Valley Boulevard to the north, Tract 6212 to the west, Pinon Street to the south and Tehachapi High School to the east.

The proposed Project site is located in the southeastern area of Tehachapi, southeast of downtown in an area that generally consists of single-family housing, multi-family housing, schools and churches. The site is currently zoned T-4 (General Urban) and is designated by the General Plan as 4B – Southern Neighborhoods. The site is vacant / undeveloped and is generally void of vegetation except for grass/weeds and scrub brush. Land uses and zoning designations of adjacent parcels surrounding the site are as follows:

Surrounding Land Use and Zoning

Location	Existing Land Use	Current Zoning Classification
North	Vacant and residential	T-4 (General Urban)
South	Vacant, residential, church	R-1-8 (Low Density Single Family Residential) and T-4
West	Residential	R-1-8 (Low Density Single Family Residential)
East	High School	RSP (Recreation, School, Public Use)

² Tehachapi General Plan EIR, page 4.9-2.

Regulatory Setting

Federal Regulations

There are no federal regulations pertinent to local land use and planning.

State Regulations and Policies

The Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56300 et seq.) governs the establishment and revision of local government boundaries. The Act was a comprehensive revision of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 1985. The Act is a policy of the state to encourage orderly growth and development that are essential to the social, fiscal, and economic well-being of the state. The intent of the Act is promote orderly development while balancing competing state interests of discouraging urban sprawl, preserving open space and prime agricultural lands, and efficiently extending government services. The Act had previously established the County Local Agency Formation Commission (LAFCO), which gave it authority to consider and approve city and special district annexation, dissolution, and formation.

California Land Conservation Act

The California Land Conservation Act, better known as the Williamson Act, was enacted by the State Legislature in 1965 to encourage the preservation of agricultural lands. Under the provisions of the act, landowners agreeing to keep their lands under agricultural production for a minimum of ten years receive property tax adjustments. Williamson Contracts limit the use of the properties to agricultural, open space, and other compatible use, Williamson Act lands are assessed based on their agricultural value, rather than their potential market value under nonagricultural uses.

Regional Land Use Regulations and Policies

Kern County Local Agency Formation Commission

Local Area Formation Commissions (LAFCOs) review proposals for the formation of new local governmental agencies and for changes in the organization of existing agencies. The objectives of the Kern County LAFCO are to: encourage orderly formation of local governmental agencies, preserve agricultural land resources and to discourage urban sprawl. The Kern County LAFCO assists in balancing the competing needs in the region for efficient services, affordable housing, economic opportunity, and conservation of natural resources. In addition, the Kern County

LAFCO considers effects that development may have on existing agricultural land and in doing so guides development toward vacant urban land and away from agricultural preserves. The Kern County LAFCO also discourages urban sprawl (i.e. irregular and disorganized growth occurring without apparent design or plan).

Thresholds of Significance

In accordance with Appendix G to the State CEQA Guidelines, the project would have a significant impact on land use as follows:

- Physically divide an established community?
- 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?

Impacts and Mitigation Measures

Impact 3.11-1: *Physically divide an established community?*

Less Than Significant. The proposed Project is a residential development on a vacant site within the City of Tehachapi. The site is zoned for residential use and is designated under the City's General plan for residential development. There are no components of the Project that would cause a physical barrier so as to divide an established community. Access to and from surrounding land uses would not be restricted as a result of the Project nor would it cause any land use changes in the surrounding vicinity that would result in a physically divided community. New through-roadways will also be created, thereby resulting in additional methods of vehicle and pedestrian movement in this area of the City. Therefore, the impact is considered to be *less than significant*.

Mitigation Measures: None required.

Impact 3.11-2: *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?*

Less Than Significant. The Project is proposed to be processed as a Planned Development Zone which is found in Chapter 3.30.160 of the City's Zoning Code. The Planned Development Zone is a mechanism that allows for a flexible regulatory procedure by which the General Plan and Zoning Code may be accomplished and is appropriate for comprehensive site planning of large

parcels. Various approvals by the City (Planning Commission and City Council) are required for the Final Master Development Plan which will include the following components:

- Final/complete site plan
- Proposed floor plans / elevations
- Tentative tract map
- CEQA documents and technical studies
- Associated studies, maps and reports

Upon approval of the Final Master Development Plan by the City Council, the Applicant is required to submit Precise Development Plans for each phase or increment of construction and must provide a level of detail satisfactory to the City Engineer. The Planning Commission considers each Precise Development Plan as they are submitted.

As previously described, the site is zoned for residential use and is designated under the City's General plan for residential development. The site is currently zoned T-4 (General Urban) and is designated by the General Plan as 4B – Southern Neighborhoods. The T-4 designation is intended for projects that are predominantly residential with a balance of housing types³. The proposed Project is an appropriate use for the site, and as demonstrated in Table 3.11-1, once approved, the proposed Project will be consistent with applicable objectives, goals and policies outlined in the City of Tehachapi General Plan.

**Table 3.11-1
General Plan Consistency Analysis**

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
Natural Resources Element	Obj. 1 – Policy NR1	<p>Improve air quality.</p> <p>Require Planting of trees along all rights-of-way and within open space per the following:</p> <p>a. Identify and use trees that are consistent with the local climate and water availability;</p>	<p>Yes: The Project includes a variety of park space, pedestrian sheds and civic space which will include climate-appropriate trees. The final landscape design of the Project will be subject to review by the City. This will</p>

³ Tehachapi General Plan Update, page 10.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		b. Maintain specifications for trees-spacing, size, quantity and planting.	ensure that the Project will conform to City policies pertaining to trees.
Natural Resources Element	Obj. 1 – Policy NR2	<p>Take affirmative steps toward reduction of motor vehicle-related air pollution including, but not limited to, the following:</p> <p>a. Require land use and transportation strategies that promote use of alternatives to the automobile for transportation, including walking, bicycling, bus transit and carpooling;</p> <p>b. Encourage the development of alternative fuel stations;</p> <p>c. Require a percentage of parking spaces in large parking lots/garages to provide electrical vehicle charging facilities;</p> <p>d. Promote ride-sharing and car-sharing programs;</p> <p>e. Discourage activities that result in unnecessary idling of vehicles;</p> <p>f. Evaluate alternative traffic control devices such as roundabouts that slow automobiles rather than devices such as traffic signals and stop signs which make automobiles start and stop.</p>	Yes: The Project is located within walking distance of downtown, bus stops, and local schools. This will result in a reduction of vehicle trips. The development will also provide some electric car charging stations, which will encourage the use of electric vehicles. To eliminate unnecessary idling, the site has been designed to install traffic circles internally in the development as well as other traffic calming features that promote walking and bicycling.
Natural Resources Element	Obj. 1 – Policy NR3	Reduce emissions for stationary point sources of air pollution (e.g., equipment at commercial and industrial facilities) and stationary area sources (e.g., wood-burning fireplaces and gas powered lawn	Yes: The Project does not contain any significant stationary point sources of air pollution such as wood-burning fireplaces. In

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>mowers) which cumulatively, represent large quantities of emissions:</p> <p>a. Work with the Air Quality Management District to achieve emission-reductions for non-attainment pollutants including carbon monoxide, ozone, and PM10;</p> <p>b. Apply the California Environmental Quality Act (CEQA) to evaluate and mitigate the local and cumulative effects of new development on air quality.</p>	<p>addition, the Project will include solar installations to meet the required solar mandate (effective January 2020) and will be designed to meet Title 24 construction requirements. These measures will reduce stationary emissions. The Air District will be notified of the Project through the CEQA process.</p>
Natural Resources Element	Obj. 2 – Policy NR4	<p>Reduce emissions from residential and commercial uses:</p> <p>a. Require new development and/or renovations of existing buildings to incorporate the following as applicable:</p> <ul style="list-style-type: none"> • High-efficiency heating and appliances such as cooking equipment, refrigerators, and furnaces and low NOX waterheaters; • Comply with or exceed the requirements of Title 24; • Passive solar building and landscape design: building and/or private open space orientation in a south to southeast direction, planting of deciduous trees on west and south side of buildings, drought-resistant landscaping; 	<p>Yes: The Project will include solar installations to meet the required solar mandate (effective January 2020) and will be designed to meet Title 24 construction requirements. High efficiency appliances will be provided in addition to natural gas connections for non-electric source of energy. The construction contractor will be required to adhere to the East Kern Air District's rules and regulations related to construction emissions.</p>

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<ul style="list-style-type: none"> • Use of previous paving and groundcover; • Encourage use of battery-powered, electric, or other similar zero-emission equipment; • Provide natural gas connections to fireplaces or require EPA certified wood stoves, pellet stoves, or fireplace inserts. <p>b. Require that contractors include, in construction contracts, the following requirements, consistent with the East Kern District's Regulations:</p> <ul style="list-style-type: none"> • Maintain construction equipment engines in good condition and in proper tune per manufacturer's specification for the duration of construction; • Minimize idling time of construction-related and/or, heavy-duty equipment, motor vehicles, and portable equipment; • Use alternative fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas and unleaded gasoline); • Use 'add-on' control devices such as diesel oxidation, catalysts or particulate filters; 	

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<ul style="list-style-type: none"> • Use diesel equipment that meets the Air Quality Management District’s certification standard for off-road heavy-duty diesel engines; • Limit construction hours/hours of operation of heavy-duty equipment. <p>c. Locate new stationary sources of air pollutants, such as industrial facilities, at sufficient distances away from residential areas and facilities that serve sensitive receptors;</p> <ul style="list-style-type: none"> • Include buffer zones within new residential and sensitive receptor site plants to separate those uses from potential sources of odors, dust from agricultural uses, and stationary sources of toxic air contaminants. 	
Natural Resources Element	Obj. 2 – Policy NR6	<p>Review development proposals with the approach that viewsheds are of two types:</p> <p>a) Valley-wide (natural) and,</p> <p>b) Within Town (urban)</p> <p>Accordingly, ‘Valley-wide’ viewsheds are from outside of town across the Planning Area while the second type ‘Within Town’ are primarily along streetscapes.</p>	Yes: The Project is located within a “Valley-wide” viewshed. The visual/aesthetic impacts of the Project have been reviewed and evaluated in accord with City policies. The Project will not result in significant impacts to viewsheds.
Natural Resources	Obj. 4 – Policies NR14 and	<p>Enforce Tehachapi’s ‘dark sky’ protocol to preserve nighttime views, prevent light pollution,</p>	Yes: The Project is subject to Title 24 Outdoor Lighting Standards as well as City

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
Element	NR15	<p>reduce light spillage both upward and onto adjoining properties;</p> <p>Require that outdoor lighting not create or worsen incompatible situations.</p>	Ordinance Code Section 4.40.090 which includes measures to reduce light spill/pollution. Outdoor security lighting will be designed with cutoff type fixtures or shielded light to reduce glare on adjacent properties.
Natural Resources Element	Obj. 2 – Policies NR42 – NR44	<p>Protect Archaeological and Paleontological Resources.</p> <p>Maintain a step in the development process for evaluating the potential for archaeological and paleontological resources;</p> <p>Maintain that excavation, exploration and documentation of archaeological and paleontological sites be conducted only by recognized authorities by applicable State laws;</p> <p>Maintain that in the event of discovering an archaeological or paleontological site, that the appropriate authorities and parties be notified according to established procedures and applicable State laws.</p>	<p>Yes. To support the cultural resource analysis, a cultural resources records search was conducted in May 2019. There have been 13 cultural resources studies within ½ mile of the Project site and there have been no cultural resources discovered in the area. However, mitigation measures have been applied in the event that undiscovered cultural resources are revealed during construction activities.</p>
Town Form Element	Obj. 2 – Policy TF7	Require that a neighborhood master plan be prepared prior to subdividing any land and that no zone changes be approved without a concurrent neighborhood subdivision and block structure (See Table 2-A for example). A neighborhood master plan shall consist of at least one pedestrian shed and address the following:	Yes: The Project Developer has prepared a master plan for the development. The Project includes five pedestrian sheds and has been designed for pedestrian movement in accord with

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		proposed block and street network and connectivity to existing network per block perimeter requirements in Table 2-3A, proposed open space distribution, and the application of zoning to each block consistent with Figure 2-3 identifying how the proposed neighborhood plan interfaces with adjacent existing or future development. The neighborhood plan may show less detail on sites not in control by the applicant but shall address the required topics above.	City requirements.
Town Form Element	Obj. 5 – Policy TF19	Require that all housing, whether single-family or multi-family, be designed in ‘house-form’ buildings and masses, and that new buildings emphasize regional architectural traditions and natural building materials.	Yes: The final architectural design of the Project will be subject to review by the City. This includes a review of exterior elevations, floor plans, aesthetic design and related features of the Project. This will ensure that the Project will conform to City policies pertaining to architectural design and use of building materials.
Town Form Element	Obj. 7 – Policy TF25	<p>Efficient Use of Land. Incorporate efficient land use and development patterns that conserve resources such as:</p> <ul style="list-style-type: none"> • Shared parking to promote mixed uses; • Parking alternatives; • Adaptive reuse of sites/structures; • Development standards (e.g., setbacks and lot coverage requirements) that 	Yes: The Project is located in close proximity to downtown, shopping, schools and restaurants. The Project has been designed in an efficient manner such that the development will occur in an area that has adequate roadways and infrastructure to support the Project.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>enable a wide variety of physical outcomes based on the intended physical environment(s);</p> <ul style="list-style-type: none"> Transit-proximate housing. 	
Town Element Form	Obj. 8 – Policy TF29 and TF30	<p>Require that architectural details bear a close relationship to the historic and geographic details of Tehachapi’s regional architecture.</p> <p>Calibrate development standards to reflect the suitability of architectural style to building type.</p>	Yes: The final architectural design of the Project will be subject to review by the City. This includes a review of exterior elevations, floor plans, aesthetic design and related features of the Project. This will ensure that the Project will conform to City policies pertaining to architectural design and use of building materials.
Town Element Form	Obj. 10 – Policy TF37 and TF38	<p>Increase development certainty through zoning and delegating of decisions.</p> <p>Focusing the Planning Commission and City Council’s time on the most important of community issues by relying on administrative actions to carry out the community vision.</p> <p>Utilize clear development requirements tailored to the community vision.</p>	Yes: The Project is proposed to be processed as a Planned Development Zone which is found in Chapter 3.30.160 of the City’s Zoning Code. The Planned Development Zone is a mechanism that allows for a flexible regulatory procedure by which the General Plan and Zoning Code may be accomplished and is appropriate for comprehensive site planning of large parcels. See also the entitlement description in Section 2.3.
Town Element Form	Obj. 12 – Policy	Energy-Efficient Incentive Programs. Maintain an incentive program to encourage new	Yes: The Project will include solar installations to meet the

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
	TF45	<p>development to incorporate the following design elements:</p> <ul style="list-style-type: none"> • Locate and design building to maximize natural day lighting and promote use of photovoltaic systems; • Energy-producing technology; • Light-colored “cool roofs”; and • Water-efficient landscapes, 	<p>required solar mandate (effective January 2020) and will be designed to meet Title 24 construction requirements. High efficiency appliances will be provided in addition to natural gas connections for non-electric source of energy.</p>
Town Element Form	Obj. 12 – Policy TF46	Energy Rebate Programs. Through coordination with the California Energy Council (CEC or other such groups), support an incentive program for the annual installation of approximately 25 solar energy systems on new and existing development.	Yes: The Project will include solar installations to meet the required solar mandate (effective January 2020).
Town Element Form	Obj. 12 – Policy TF47	Location-Efficient Mortgage and Energy-Efficient Mortgage. Promote Location-Efficient Mortgage and Energy-Efficient Mortgage programs, such as the Single-Family Low-Income Incentive Program within the California Solar Initiative.	Yes: The Project will include solar installations to meet the required solar mandate (effective January 2020).
Town Element Form	Obj. 12 – Policy TF48	Efficient Upgrades. Apply the California Energy Commission energy efficiency requirements in new housing and encourage the annual installation of approximately 15 energy saving devices in pre-1975 housing.	Yes: The Project will include solar installations to meet the required solar mandate (effective January 2020) and will be designed to meet Title 24 construction requirements. High efficiency appliances will be

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
			provided in addition to natural gas connections for non-electric source of energy.
Town Element Form	Obj. 12 – Policy TF51	Energy-Use Reduction. Monitor energy and water usage in Tehachapi and investigate other appropriate programs to achieve a 20 percent reduction in overall energy usage, conserving these and other natural resources.	Yes: The Project will include solar installations to meet the required solar mandate (effective January 2020) and will be designed to meet Title 24 construction requirements. High efficiency appliances will be provided in addition to natural gas connections for non-electric source of energy.
Town Element Form	Obj. 14 – Policies TF55 – TF57	<p>Greenhouse Gas Reduction.</p> <p>Pro-actively cooperate with the state to implement AB 32 to achieve the required greenhouse gas emissions reductions;</p> <p>In cooperation with the state and Kern COG proactively promote implementation of SB 375;</p> <p>Reduce greenhouse gas emissions and adapt to climate change with efforts in the following areas:</p> <ul style="list-style-type: none"> • energy. Key adaptation strategies will include incentivizing renewable energy installation, facilitating green technology and business, and reducing community-wide energy consumption; • land use. Key adaptation strategies will include transit-oriented development, compact development, infill development, and encouraging a mix of uses; 	Yes: As described in Section 3.8 – Greenhouse Gases / Climate Change, the project is in compliance with the Air Basin’s greenhouse gas rules and regulations.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<ul style="list-style-type: none"> • transportation. Key adaptation strategies will include enhanced multi-modal transportation, cycling infrastructure and walking infrastructure; • buildings. Key adaptation strategies will include green building incentives, assessment of green building techniques as a formal phase of city design review, and development of a green building ordinance. Adaptation strategies will also include increased water efficiency in buildings; • waste. Key mitigation strategies will include increased composting and recycling, and efforts to reduce waste generation; • ecology. Key adaptation strategies will include tree planting and native and drought-resistant planting; • Government operations. Key adaptation strategies will include green procurement and energy saving in operations and maintenance; • Communication and Programs. Key adaptation strategies may include energy or climate change themed publications and workshops, facilitating energy audits for residents or establishing partnerships to promote climate action. 	
Views and Dark Skies	Obj. 4 – Policy NR14 and NR15	<p>Minimize light pollution.</p> <p>Enforce Tehachapi’s ‘dark sky’ protocol to preserve nighttime views, prevent light pollution,</p>	<p>Yes: The Project is subject to Title 24 Outdoor Lighting Standards as well as City Ordinance Code Section 4.40.090 which includes</p>

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>reduce light spillage both upward and onto adjoining properties.</p> <p>Require that outdoor lighting not create or worsen incompatible situations.</p>	measures to reduce light spill/pollution. Outdoor security lighting will be designed with cutoff type fixtures or shielded light to reduce glare on adjacent properties.
Public Realm Element	Obj. 1 – Policy PR 2	<p>Connect with nature</p> <p>Incorporate bicycle and pedestrian access into all thoroughfare types, according to the intended context they are to generate or support.</p>	Yes: Existing bicycle routes are located near and adjacent to the Project along Dennison Road, Pinon Street and Curry Street. In addition, the Project provides pedestrian sheds within the development.
Public Realm Element	Obj. 2 – Policies PR 6 – PR9	<p>Enhance access and walkability</p> <p>Maintain thoroughfare standards that enable short pedestrian crossing distances;</p> <p>Maintain bicycle access-types (class 1, 2 or 3) on all thoroughfare types including grade-separations;</p> <p>Maintain development and subdivision standards that result in block length/size requirements based on their location and transect zone within Tehachapi;</p>	Yes: Existing bicycle routes are located near and adjacent to the Project along Dennison Road, Pinon Street and Curry Street. In addition, the Project provides pedestrian sheds within the development.
Public Realm Element	Obj. 3 – Policies PR10 – PR15	<p>Maintain a Network of Open Space Types.</p> <p>Coordinate open space types with the appropriate physical context they are intended to serve.</p>	Yes: The Project includes a total of five pedestrian sheds, all civic space, with an additional ~9 acres of park space within the development (this is in excess of the 6.9 acres

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>Coordinate the subdivision standards with the open-space types identified in Table 2-7.</p> <p>As practical, provide additional recreational, cultural, and non-school related opportunities through agreements with public and/or private institutions for the joint-use of natural open space (including seasonal detention basins and school playgrounds).</p> <p>Develop a program that requires new residential development to dedicate land, pay in-lieu fees, or otherwise contribute its fair share toward the acquisition and development of parks and/or recreation facilities to meet the community's service goals.</p> <p>Coordinate the development of parks and community recreation facilities/services with the pace of new development/investment.</p>	<p>required for this Project). The pedestrian sheds and parks will be open to the public.</p> <p>The final landscape design of the Project will be subject to review by the City. This will ensure that the Project will conform to City policies pertaining to trees.</p>
Flora and Fauna	Obj. 1 – Policy NR26	As part of the discretionary review process for development proposals, identify and protect significant resources through project design;	Yes. The Project site was surveyed by a qualified biologist. No protected plant or animal species were identified on site.
Flora and Fauna	Obj. 2 – Policy NR30 and NR31	<p>Require the use of native plant species in rural and urban areas</p> <p>Enhance the existing tree resources through regulations that set forth thresholds for identifying and protecting a significant tree resource.</p> <p>Maintain planting standards that:</p>	Yes: The Project includes a variety of park space, pedestrian sheds and civic space which will include climate-appropriate trees and vegetation.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>a. Minimize the need for water;</p> <p>b. Reflect the various intended physical context to which they will be applied.</p>	
Sustainable Infrastructure Element – Utility Infrastructure	Obj. 2 – Policy SI25	<p>Incorporate low impact development BMP's at all scales of the community.</p> <p>Provide dual plumbing for all new public developments in anticipation of future water recycling or water re-use infrastructure.</p>	Yes. The Project will include separate plumbing for non-potable outdoor irrigation. The Project is also subject to the Model Water Efficient Landscape Ordinance and other water saving measures.
Sustainable Infrastructure Element – Watershed and Water Supply	Obj. 1 – Policies SI1 – SI4	<p>Protect the overall health of the watershed.</p> <p>Protect stream corridors and recharge areas from development.</p> <p>Locate and map all aquifer recharge locations.</p> <p>Improve quality of urban stormwater runoff before discharging to water body or infiltration into aquifer.</p> <p>Incorporate low impact design stormwater best management practices (BMPs).</p>	Yes. A Drainage and Detention Study was prepared for the Project. Stormwater will be collected in a detention basin with the intent to connect to the City's existing stormwater system. The system will be designed in accordance with City of Tehachapi standards. Stormwater management BMPs have been incorporated into the Project.
Sustainable Infrastructure Element – Watershed and Water Supply	Obj. 2 – Policies SI5 – SI10	<p>Reduce discharge volumes.</p> <p>Reuse stormwater flows on site.</p> <p>Where soils allow for infiltration, promote infiltration into groundwater basin.</p> <p>Reduce imperviousness.</p>	Yes. A Drainage and Detention Study was prepared for the Project. Stormwater will be collected in a detention basin with the intent to connect to the City's existing stormwater system. The detention basin will allow for some minor

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>Slow stormwater runoff through low impact design BMPs.</p> <p>Naturalize channels whenever possible to maximize recharge opportunities.</p> <p>Discourage large scale retention basins in favor of a decentralized approach, accommodating as much runoff on site as possible to minimize standing water, maximize infiltration, and improve aesthetics. Vegetated BMPs should be landscaped with native, drought tolerant plantings which conserve water and are cost effective.</p>	<p>groundwater recharge opportunities. The system will be designed in accordance with City of Tehachapi standards. Stormwater management BMPs have been incorporated into the Project.</p>
Sustainable Infrastructure Element – Watershed and Water Supply	Obj. 2 – Policy SI24	<p>Incorporate low impact development BMP's at all scales of the community.</p> <p>Use low impact development BMP's such as the following to address stormwater and improve water quality.</p> <p>a. Decentralize stormwater basins, accommodating as much runoff on-site as possible.</p> <p>b. Improve surface water quality through increased use of bioretention basins and infiltration measures where possible.</p> <p>c. Require that 5% of all impervious surfaces will function as onsite bioretention or infiltration.</p> <p>d. Convey stormwater through natural courses whenever possible rather than through pipes.</p>	<p>Yes. A Drainage and Detention Study was prepared for the Project. Stormwater will be collected in a detention basin with the intent to connect to the City's existing stormwater system. The detention basin will allow for some minor groundwater recharge opportunities. The system will be designed in accordance with City of Tehachapi standards. Stormwater management BMPs have been incorporated into the Project.</p>

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>e. Encourage disconnection of downspouts from storm drain system.</p> <p>f. Encourage stormwater reuse.</p> <p>g. Combine open space.</p>	
Sustainable Infrastructure Element – Watershed and Water Supply	Obj. 3 – Policies SI11 – SI20	<p>Protect and conserve groundwater resources.</p> <p>Develop an Urban Water Management Plan in accordance with state requirements.</p> <p>Continue to perform Water Source Assessments.</p> <p>Require new, high consuming users to secure an alternative water source other than groundwater.</p> <p>Reuse stormwater for on-site irrigation.</p> <p>Provide incentives for disconnecting downspouts.</p> <p>Support the development of future sources of water, including recycled water or TCCWD water for common area landscape irrigation.</p> <p>Require new development to contribute to the cost of upgrading the wastewater treatment plant to tertiary level.</p> <p>Require new development outside of the adjudicated groundwater basin to identify its source of water.</p>	<p>Yes. In accord with Senate Bill 610, a Water Supply Assessment was prepared for the Project. It was determined that there is adequate water to serve the Project through a combination of water sources. The Project will be required to secure non-potable water for outdoor irrigation and to pay water fees, or equivalent in-lieu, to the City for potable water. The Project will also be required to pay wastewater (sewer) connection fees, or in-lieu, to the City. These fees will contribute to the City's ability to develop better and more efficient water and sewer systems.</p>

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>Avoid potential contaminants near vulnerable wells.</p> <p>New developments should utilize public water and sewer systems.</p>	
Sustainable Infrastructure Element – Energy	Obj. 1 – Policies SI30 – SI35	<p>Promote energy conservation and the development of renewable energy sources</p> <p>Integrate energy efficient measures into regulations and standards for land use, zoning, site orientation, building, housing, infrastructure, transportation, power and transmission, water and waste;</p> <p>Provide rebates/incentives for ENERGY STAR® appliances, compact fluorescent light bulbs, dual pane windows, appliance recycling and home insulation;</p> <p>Promote the use of “cool roofs,” which reflect the sun’s heat back to the sky rather than transferring it to the building;</p> <p>Shade south and west facing windows where possible;</p> <p>Promote the use of solar panels in all development, especially when building, acquiring, or retrofitting public facilities;</p> <p>Select materials for rooftop technology that are sensitive to the visual needs of pilots in the area.</p>	<p>Yes: The Project will include solar installations to meet the required solar mandate (effective January 2020) and will be designed to meet Title 24 construction requirements. High efficiency appliances will be provided in addition to natural gas connections for non-electric source of energy. The types of building materials to be used will be evaluated by the City during the formal architectural review process.</p>
Sustainable Infrastructure Element –	Obj. 3 – Policies SI37 – SI39	<p>Increase use of renewable energy</p>	<p>Yes: The Project will include solar installations to meet the required solar mandate</p>

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
Energy		<p>Continue to pursue local energy supply management and distribution opportunities;</p> <p>Develop an incentive program to assist with business and/or home renewable energy systems such as solar panels and wind power;</p> <p>Apply the California Solar Rights Act of 1978, which authorizes cities and counties to require solar easements as a condition of subdivision approval to assure each parcel or unit the right to receive sunlight across adjacent parcels or units for any solar energy system.</p>	(effective January 2020) and will be designed to meet Title 24 construction requirements. High efficiency appliances will be provided in addition to natural gas connections for non-electric source of energy.
Sustainable Infrastructure Element – Utility Infrastructure	Obj. 1 – Policies SI21, SI23, SI23A and S123B	<p>As identified in Figure 2-1 (Community Structure Plan), priority should be given to infill development located adjacent to existing infrastructure in order to decrease the need and expense for extensions of the backbone grid.</p> <p>Provide dual plumbing for all new public parks and landscape projects in anticipation of future water recycling or water re-use infrastructure to be used for irrigation.</p> <p>Provide adequate domestic water distribution capacity per the following intervals:</p> <ul style="list-style-type: none"> a. Minimum 12-inch lines at section lines; b. Minimum 10-inch lines at quarter-section lines; 	<p>Yes: The Project is located in an area near downtown that is planned for residential development and that is located adjacent to existing City-provided infrastructure (water, sewer, stormwater). The Project Developer will be required to connect to existing infrastructure and will provide the appropriately sized water, sewer and storm drain lines.</p> <p>The Project will include separate plumbing for non-potable outdoor irrigation.</p>

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>c. Minimum 8-inch lines within quarter-sections.</p> <p>Provide adequate sanitary sewer capacity per the following:</p> <p>a. Minimum 8-inch lines;</p> <p>b. Minimum 4-inch laterals.</p>	
Sustainable Infrastructure Element – Utility Infrastructure	Obj. 2 – Policies SI24 - SI26	<p>Use Low-Impact Development BMPs.</p> <p>Use low impact development BMPs such as the following to address stormwater and improve water quality.</p> <p>a. Decentralize stormwater basins, accommodating as much runoff onsite as possible.</p> <p>b. Improve surface water quality through increased use of bioretention basins and infiltration measures where possible.</p> <p>c. Require that 5% of all impervious surfaces function as on-site bioretention or infiltration.</p> <p>d. Convey stormwater through natural courses whenever possible rather than through pipes.</p> <p>e. Encourage disconnection of downspouts from storm drain system.</p> <p>f. Encourage stormwater reuse.</p> <p>g. Combine open space areas with stormwater management where possible.</p>	<p>Yes. A Drainage and Detention Study was prepared for the Project. Stormwater will be collected in a detention basin with the intent to connect to the City's existing stormwater system. The detention basin will allow for some minor groundwater recharge opportunities. The system will be designed in accordance with City of Tehachapi standards. Stormwater management BMPs have been incorporated into the Project.</p>

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>Incorporate low impact development BMP's at all scales of the community</p> <p>Provide dual plumbing for all new public developments in anticipation of future water recycling or water re-use infrastructure.</p> <p>Private development is responsible for installing all local water and sewer lines within a development.</p>	
Sustainable Infrastructure Element – Utility Infrastructure	Obj. 3 – Policies SI27 – SI29	<p>Reduce Solid Waste.</p> <p>Encourage all new development to include opportunities for recycling on-site;</p> <p>Encourage recycling at all scales of development;</p> <p>Encourage entrepreneurial activity with recyclable materials such as the recycling of clothing for insulation, and holiday trees for mulch.</p>	Yes. Waste Management, Inc., a private company, provides refuse collection and disposal services to the City of Tehachapi. Separate cans for waste and recyclables are provided in the City. The proposed Project would be required to comply with applicable state and local requirements including those pertaining to solid waste, construction waste diversion, and recycling.
Civic Culture and Health Element	Obj. 3 – Policies CH9 and CH10	<p>Maintain a balanced and healthy physical environment that prioritizes pedestrian-use of the public realm while accommodating all other modes and needs;</p> <p>Promote walkability and the associated health benefits by supporting interconnectivity at all scales of the community as well as the appropriate integration of service and retail within easy walking distance of neighborhoods.</p>	Yes: The Project includes a total of five pedestrian sheds, all civic space, with an additional ~9 acres of park space within the development (this is in excess of the 6.9 acres required for this Project). The pedestrian sheds and parks will be open to the public.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
			The Project is located within walking distance of downtown, bus stops, and local schools.
Civic Culture and Health Element	Obj. 6 – Policies CH20, CH21, CH22, and CH24	<p>Appropriately manage archaeological and paleontological sites important to the community's heritage.</p> <p>Regularly update and reflect in all appropriate documents, any mapping regarding archaeological and paleontological sites.</p> <p>Integrate the preservation of archaeological and paleontological resources into the planning and development process as early as possible.</p> <p>Manage the discovery of human remains and the protection of archaeological deposits in accordance with local, state, and federal requirements as well as through communication with descendant communities.</p> <p>Maintain local requirements for archaeological and historical analyses, studies and reports.</p>	<p>Yes. To support the cultural resource analysis, a cultural resources records search was conducted in May 2019.</p> <p>There have been 13 cultural resources studies within ½ mile of the Project site and there have been no cultural resources discovered in the area. However, mitigation measures have been applied in the event that undiscovered cultural resources are revealed during construction activities.</p>
Community Safety Element – Geology/Seismic Hazards	Obj. 1 – Policy CS1	<p>Avoid and/or address seismic and geologic hazards through early and clear information.</p> <p>Require the following of project applicants as appropriate to the proposed land use/development activity:</p>	Yes: The Project is located on relatively flat land and is not located within 100 feet of an active fault. The Project is located approximately 15 miles from the White Wolf fault and 4 miles from the Garlock fault (not ruptured

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>a. Geotechnical evaluations and mitigation prior to development on any property with the following characteristics:</p> <ul style="list-style-type: none"> i. Contains slopes greater than 10 percent or that otherwise have potential for landsliding, ii. Within an Alquist-Priolo earthquake fault zone or within 100 feet of an identified active or potentially active fault, iii. Within areas mapped as having moderate or high risk of liquefaction, subsidence, or expansive soils, iv. Within the 100-year flood zone, in conformance with all Federal Emergency Management Agency regulations; v. Having the reasonable potential for seismic and geologic hazards. <p>b. That all analyses adequately address site-specific questions such as slope stability, erosion, subsidence, groundwater effects and earthquakes. The effects of proposed development on adjacent upslope and downslope areas as well as on the site itself shall be evaluated;</p> <p>c. Apply Chapter 18 of the California Building Code regulating earth work and grading during construction, Chapter 32 - Encroachments into Public Right-of-Way, and Chapter 33 - Safeguards During Construction (includes protection of adjoining property, and temporary use of streets & public property);</p>	<p>in recorded history). Surface fault rupture in the City is considered low, however groundshaking is relatively common in the area. Prior to ground disturbing activities, the California Building Code, Title 24, Part 2, Chapter 18 requires a geotechnical study be performed at the design level which will be subject to review by the City. The developer will be required to design the Project in accordance with the latest seismic design standards of the California Building Code, which will address potential impacts from geologic hazards.</p>

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		d. Limit acreage of bare soils exposed at any one time. Restrict grading to the dry season and require immediate re-vegetation for areas of the site slated to be left.	
Community Safety Element - Noise	Obj. 2 – Policies CS63 – CS65	<p>Improve Tehachapi’s noise environment.</p> <p>Incorporate noise considerations into planning and development decision-making, and guide the location and design of transportation facilities to minimize the effects of noise on nearby land uses.</p> <p>Coordinate the location of new noise-sensitive uses to their appropriate noise-environment to avoid such incompatible situations such as dwellings in areas with projected noise levels greater than 75 dB CNEL.</p> <p>Where noise-sensitive uses are permitted in areas with 65 dB or greater, require incorporation of mitigation measures to ensure that interior noise levels do not exceed 45 dB CNEL.</p> <p>Incorporate the following into Tehachapi’s Noise Ordinance:</p> <p>a. Require that applicants for new noise-sensitive development in areas subject to noise levels greater than 65 dB CNEL obtain the services of a professional acoustical engineer to provide a technical analysis and design of appropriate mitigation measures;</p>	Yes: The Project is located within an area that includes residential housing, schools and churches. As a residential development, the Project does not include any non-typical noise producers. The Project has been determined to be within the City’s noise limits.

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		<p>b. Limit the maximum noise levels from commercial/industrial development of 75 dB(A);</p> <p>c. Require placement of fixed equipment, such as air conditioning units and condensers, inside or in the walls of new buildings or on roof-tops of central units in order to reduce noise impacts on any nearby sensitive receptors;</p> <p>d. Maintain appropriate noise-emission standards in connection with the purchase, use, and maintenance of City vehicles;</p> <p>e. Require control of noise or mitigation measures for any noise emitting construction equipment or activity.</p>	
Community Safety Element - Flood	Obj. 5 – Policy CS15	<p>Avoid new development in designated floodplains.</p> <p>Require new development within the 100-year floodplain to implement measures as identified in the Flood Plain Ordinance, to protect structures from 100-year flood hazards (e.g., by raising the finished floor elevation outside the floodplain).</p>	Yes: The Project is located outside of a designated flood zone.
Community Safety Element – Fire Hazard	Obj. 6 – Policies CS21 – CS25	<p>Minimize risk to life and property from fire hazards.</p> <p>Require that, as relevant, new development applications include a map that identifies areas of wildfire hazard.</p> <p>Require adequate fire flow and emergency access.</p>	Yes: The Project is located in an area surrounded by substantial development, which reduces the risk of wildfire. The Project has been designed to provide adequate fire flows and will be reviewed by the Kern

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>Maintain fuel modification zones between developed areas and natural areas. Fuel Modification Zones shall be maintained at private expense or through a maintenance district and on private property according to the applicable standards and regulations of the Kern County Fire Department.</p> <p>Require fire-resistant building materials for all structures.</p> <p>Require house sprinklers for development in:</p> <p>a. Areas identified in the T-2, T-2.5 or T-3;</p> <p>b. Areas exceeding 5 percent slope.</p>	County Fire Department for placement of fire hydrants and other fire related infrastructure. The site is located in Area T-4, which does not require in-house sprinklers.
Community Safety Element – Airport Conflicts	Obj. 8 – Policies CS30 – CS31	<p>Minimize the potential for disaster from Airports and land use conflicts.</p> <p>Coordinate with Kern County whenever an airport safety zone is involved in planning or decision making.</p> <p>Prohibit conflicts with approach surfaces, clear zones, or Federal Aviation Regulation Part 77 imaginary surfaces as depicted in the Master Plan Report for the Tehachapi Municipal Airport or the Mountain Valley Airport.</p>	Yes. The Project is located approximately ¼ mile south of the Tehachapi Municipal Airport. Most of the Project is located within the Kern County Airport Land Use Plan Zone C. Residential projects are allowed in Zone C with a dedication of overflight easement for residential uses.
Community Safety Element – Hazardous Materials	Obj. 12 – Policy CS44	Maintain an accurate inventory of environmentally contaminated sites to inform the public about contamination from previous uses. To the extent feasible, work directly with landowners in the cleanup of	Yes. The proposed Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The nearest

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		these sites, particularly in areas with the potential for regeneration of sites/buildings.	Department of Toxic Substances Control listed site is the Nunes Ranch Cleanup Program Site (Geotracker identified the hazardous substance at this location as “other petroleum”). The site address is 21001 Dennison Road and is approximately 500 feet east of the Project site at Valley Boulevard. The site is listed as Open – Inactive. In addition, the nearest Leaking Underground Tank (LUST) Cleanup site was at the D.O.T. Garage (Caltrans) at 320 Tehachapi Boulevard, approximately ¼ miles northwest of the Project site. That case was closed.
Community Safety Element – Hazardous Materials	Obj. 12 – Policy CS45	<p>Minimize the risk to life and property from the production, use, storage, transport, and disposal of hazardous materials and waste.</p> <p>Maintain zoning provisions and environmental review processes that limit the location of facilities using hazardous materials. Require safe distances between these sites and residential areas, groundwater recharge areas and waterways.</p>	Yes: The Project only involves residential housing. This type of land use does not routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common residential grade hazardous materials such as cleaners, paint, petroleum products, etc. The proposed Project would not create a significant hazard through

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
			the routine transport, use, or disposal of hazardous materials, nor would a significant hazard to the public or to the environment through the reasonably foreseeable upset and accidental conditions involving the likely release of hazardous materials into the environment occur.
Community Safety Element – Hazardous Materials	Obj. 12 – Policy CS48	<p>Minimize the risk to life and property from the production, use, storage, transport, and disposal of hazardous materials and waste.</p> <p>Minimize exposure to airborne pollution through the following:</p> <ul style="list-style-type: none"> a. Require air pollution point sources to be located at safe distances from sensitive sites such as homes and schools; b. Require analysis and corresponding mitigation of individual development projects in accordance with the most current version of Kern County Air Pollution Control District Air Quality Assessment Guidelines; c. Require payment of fees to fund regional transportation demand management (TDM) programs for all projects generating emissions in excess of Kern County Air Pollution Control District adopted levels; d. Allow sensitive land uses such as dwellings, schools, daycare 	Yes: There are no air pollution point sources associated with the Project. An Air Impact Assessment was prepared for the Project which included multiple mitigation measures to minimize air emissions from the Project. The Project does not present a significant risk of hazardous materials.

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		<p>centers, playgrounds, medical facilities within or adjacent to areas designated for substantial industrial uses (e.g., heavy manufacturing, vehicle painting, etc.) only after an analysis, provided by the proponent, demonstrates that the health risk will not be significant;</p> <p>e. Adopt new development code provisions to ensure that individual uses in mixed-use projects do not pose significant health effects;</p> <p>f. Provide information to residents and businesses about ways to reduce or eliminate the use of hazardous materials, including the use of safer non-toxic equivalents.</p>	
Community Safety Element – Police and Fire	Obj. 13 – Policies CS52 and CS53	<p>Support Tehachapi’s environment and character through appropriately ready and staffed Fire and Police Departments.</p> <p>Optimize firefighting, emergency response and police capabilities through the following as appropriate:</p> <p>a. Continued improvement of existing facilities and adequate staffing in response to land use and development activity;</p> <p>b. Involvement of fire and police staff in the land use/development permit process.</p> <p>Improve emergency response time through the following as appropriate:</p>	Yes: The Project will be required to pay fire and police impact fees to fund the staffing and/or improvements necessary for those departments to serve the Project.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		<p>a. Increasing firefighting and support staff resources;</p> <p>b. To the extent feasible, add fire station(s) in development areas to assure consistent response times throughout Tehachapi. At a minimum, any development in subarea 5B requires an additional fire station - including on-site staffing and equipment;</p> <p>c. Require the funding of new services from fees, assessments, or taxes as development permits are approved per a nexus study that is used to implement a citywide impact fee.</p>	
Community Safety Element – Police and Fire	Obj. 13 – Policy CS55	<p>Increase public access to police services through the following as appropriate and practical:</p> <p>a. Increase police staffing to coincide with increasing population, development, and calls for service;</p> <p>b. Increase community participation through programs such as Citizens Emergency Response Team, Neighborhood Watch, Volunteers in Policing Program;</p> <p>c. Require the funding of new services from fees, assessments, or as development permits are approved per a nexus study that is used to implement a citywide impact fee;</p> <p>d. Provide education to community groups and to schools about specific safety concerns such as senior-targeted fraud</p>	Yes: The Project will be required to pay police impact fees to fund the staffing and/or improvements necessary for the department to serve the Project.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		and property crimes.	
Community Safety Element – Public Safety	Obj. 13 – Policies CS57 and CS59	<p>Within the context of a pedestrian-oriented, small town, promote the use of defensible space concepts (site and building lighting, visual observation of open space, secured areas, and so on) in project design to enhance public safety.</p> <p>Develop and/or expand existing education programs addressing personal safety awareness, such as neighborhood watch and commercial association watch/protection programs.</p>	Yes: The Project design is subject to final approval by the City of Tehachapi. This will include an evaluation of defensible space as it applies to the Project. The City will also continue to encourage safety and protection programs.
Community Safety Element – Police and Fire	Obj. 13 – Policy CS58	<p>As part of the land use/development permit process, incorporate the following as appropriate and practical:</p> <p>a. Assessment of the impacts of new development on the level of police and fire services provided to the community; an impact fee to provide public safety should be considered for projects that have significant impacts to existing police and fire services;</p> <p>c. Analysis of site plan layout in terms of defensible space for new developments in the Land use/development permit process;</p> <p>d. Require that fire and public hazards be eliminated or reduced to acceptable levels;</p> <p>e. Require site design features, fire retardant building materials, and adequate egress systems as</p>	Yes: The Project will be required to pay fire and police impact fees to fund the staffing and/or improvements necessary for those departments to serve the Project. Final Project design is subject to final approval by the City of Tehachapi. This will include an evaluation of defensible space as it applies to the Project.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		conditions for approval of development or improvements to reduce the risk of fire.	
Mobility Element	Obj. 1 – Policies 1-3	<p>Connect as many streets as possible.</p> <p>Require new through-roadways where necessary for addition connections and congestion relief;</p> <p>Extended bicycle and equestrian routes where appropriate;</p> <p>Increase regional roadway connections to improve mobility.</p>	Yes: The Project has been designed with 12 points of ingress and egress. Through-roads will be provided by the Project. Existing bicycle routes are located near and adjacent to the Project along Dennison Road, Pinon Street and Curry Street.
Mobility Element	Obj. 2 – Policy 2	Reserve or acquire right of way for future roadway improvements consistent with the Mobility Element.	Yes: The Project will be required to provide right of way for roadway improvements within the development.
Mobility Element	Obj. 3 – Policy 1	Maintain / generate context-related level of service standards for each street type within Tehachapi's sphere of influence.	Yes: The Project will be required to mitigate traffic impacts to a less than significant level, thereby maintaining adequate levels of service.
Mobility Element	Obj. 4 – Policies 1 - 3	<p>Fund roadway improvements from a variety of sources.</p> <p>Require new development to pay its fair share of transportation improvements per the Mobility Element.</p> <p>Generate a near- and long-term strategy for identifying and applying for state and federal transportation funds.</p>	Yes: The Project will be required to mitigate traffic impacts to a less than significant level through a variety of mitigation including payment of transportation impact fees.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		Generate a local funding source for transportation maintenance.	
Mobility Element	Obj. 5 – Policies 1 and 2	<p>Correspond traffic-control devices to their physical context.</p> <p>Promote the use of stop signs, road diets (i.e. reconfiguration of existing oversized streets), or roundabouts on secondary and local streets as practical.</p> <p>Implement traffic signals only when other traffic control measures are determined by the City to be inappropriate or unadvisable.</p>	Yes: The Project will be required to mitigate traffic impacts by installing traffic control devices at the direction of the City.
Mobility Element	Obj. 8 – Policies 1 - 3	<p>Enhance and explore the pedestrian and bicycle network.</p> <p>Maintain a bicycle network plan that connects bikeways, including multi-use trails, with activity centers.</p> <p>Enable short pedestrian-crossing distances.</p> <p>Require pedestrian infrastructure consistent with the street hierarchy and intended physical context.</p>	<p>Yes: The Project includes a total of five pedestrian sheds, all civic space, with an additional ~9 acres of park space within the development (this is in excess of the 6.9 acres required for this Project). The pedestrian sheds and parks will be open to the public.</p> <p>The Project is located within walking distance of downtown, bus stops, and local schools.</p>

The proposed Project is an appropriate use for the site, and as demonstrated in Table 3.11-1, the Project will be consistent with the applicable objectives, goals and policies outlined in the Tehachapi General Plan. Implementation of these policies and measures will ensure that impacts remain *less than significant*.

Mitigation Measures: None are required.

3.13 Noise

This section evaluates the potential for noise and groundborne vibration impacts resulting from implementation of the proposed Project. This includes the potential for the proposed Project to result in impacts associated with a substantial temporary and/or permanent increase in ambient noise levels in the vicinity of the Project site; exposure of people in the vicinity of the Project site to excessive noise levels, groundborne vibration, or groundborne noise levels; and whether this exposure is in excess of standards established in the local general plan or noise ordinance. No IS/NOP comments were received pertaining to noise.

Fundamentals of Sound and Environmental Noise

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway. Table 3.13-1, Representative Environmental Noise Levels, illustrates representative noise levels in the environment.

Table 3.13-1: Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 100 feet		
	—100—	
Gas Lawnmower at 3 feet		
	—90—	
		Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime		
Gas Lawnmower at 100 feet	—70—	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	—60—	
		Large Business Office
Quiet Urban Area during Daytime	—50—	Dishwasher in Next Room
Quiet Urban Area during Nighttime	—40—	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime		
	—30—	Library
Quiet Rural Area during Nighttime		Bedroom at Night, Concert Hall (background)
	—20—	
		Broadcast/Recording Studio
	—10—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing
<i>Source: California Department of Transportation, Technical Noise Supplement, October 1998.</i>		

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- **Leq** – An Leq, or equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- **Lmax** – The maximum instantaneous noise level experienced during a given period of time.
- **Lmin** – The minimum instantaneous noise level experienced during a given period of time.
- **Ldn** – The Day-Night Average Level, is a 24-hour average Leq with a 10 dBA “weighting” added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for noise sensitivity

in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24 hour Leq would result in a measurement of 66.4 dBA Ldn.

- CNEL – The Community Noise Equivalent Level is a 24-hour average Leq with a 5 dBA “weighting” during the hours of 7:00 P.M. to 10:00 P.M. and a 10 dBA “weighting” added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24 hour Leq would result in a measurement of 66.7 dBA CNEL.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day, night, or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60–70 dBA range, and high above 70 dBA. Noise levels greater than 85 dBA can cause temporary or permanent hearing loss. 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. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate level noise environments are urban residential or semi-commercial areas (typically 55–60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas (60–75 dBA) or dense urban or industrial areas (65–80 dBA).

Under controlled conditions, in an acoustics laboratory, the trained (enhanced listening abilities) healthy human ear is able to discern changes in sound levels of 1 dBA, when exposed to steady, single frequency “pure tone” signals in the mid-frequency range. Outside of such controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise. It is widely accepted that in the community noise environment the average healthy ear can barely perceive CNEL noise level changes of 3 dBA. CNEL changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA CNEL increase is readily noticeable, while the human ear perceives a 10 dBA CNEL increase as a doubling of sound.

Noise levels from a particular source generally decline as distance to the receptor increases. Other factors, such as the weather and reflecting or barriers, also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically “hard” locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically “soft” locations (i.e., the area between the source and receptor is normal earth or has vegetation,

including grass). Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels are also generally reduced by 1 dBA for each 1,000 feet of distance due to air absorption. Noise levels may also be reduced by intervening structures – generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The normal noise attenuation within residential structures with open windows is about 17 dBA, while the noise attenuation with closed windows is about 25 dBA.¹

Fundamentals of Environmental Groundborne Vibration

Vibration is sound radiated through the ground. Vibration can result from a source (e.g., train operations, motor vehicles, machinery equipment, etc.) causing the adjacent ground to move, thereby, creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as groundborne vibration. The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration levels. PPV is defined as the maximum instantaneous peak of the vibration level, while RMS is defined as the square root of the average of the squared amplitude of the level. PPV is typically used for evaluating potential building damage, while RMS velocity in decibels (VdB) is typically more suitable for evaluating human response.

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

The general human response to different levels of groundborne vibration velocity levels is described in Table 3.13-2, Human Response to Different Levels of Groundborne Vibration.

¹ National Cooperative Highway Research Program Report 117, Highway Noise: A Design Guide for Highway Engineers, 1971.

Table 3.13-2: Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.
<i>Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.</i>	

Environmental Setting

Study Area

The proposed Project site is located in the southeastern area of Tehachapi, southeast of downtown in an area that generally consists of single-family housing, multi-family housing, schools and churches. The 138-acre site is bounded by Valley Boulevard to the north, Tract 6212 to the west, Pinon Street to the south and Tehachapi High School to the east.

The site is currently zoned T-4 (General Urban) and is designated by the General Plan as 4B – Southern Neighborhoods. The site is vacant / undeveloped and is generally void of vegetation except for grass/weeds and scrub brush.

Major roads in the Project area include:

Valley Boulevard is an east-west roadway designated as a major arterial and a transit corridor in the Tehachapi General Plan. A majority of the existing roadway consists of one lane in each direction. Areas of development and widening, including curb, gutter, and sidewalk, are interspersed with narrow segments of roadway adjacent to less-developed, rural-type settings. Posted speed limits of 40 MPH were observed. Valley Boulevard is State Route 202 west of Tucker Road.

Pinon Street is an east-west roadway designated as a minor arterial (collector) in the Tehachapi General Plan. Pinon Street terminates approximately 1,700 feet west of Curry Street and approximately 3,000 feet east of Curry Street, so it has not yet been fully developed through Tehachapi. Pinon Street consists of one lane in each direction. Posted speed limits were not observed.

Dennison Road is a north-south roadway designated as a major arterial and a transit corridor in the Tehachapi General Plan. The roadway consists of one lane in each direction with a posted speed limit of 35 MPH.

Curry Street is a north-south roadway designated as a minor arterial (collector) and a transit corridor in the Tehachapi General Plan. The roadway consists of one lane in each direction with a posted speed limit of 35 MPH south of C Street. Within the study area Curry Street terminates at Tehachapi Boulevard. Speed limits are not posted north of C Street, where a prima facie speed limit of 25 MPH would likely apply.

There are two airports in Tehachapi: The Tehachapi Municipal Airport (public airport near central Tehachapi) and the Mountain Valley Airport (private airport used for glider operations).²

Regulatory Setting

Federal Regulations

Noise Standards

There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the proposed Project. With regard to noise exposure and workers, the Office of Safety and Health Administration (OSHA) regulations safeguard the hearing of workers exposed to occupational noise.

Vibration Standards

The Federal Transit Administration (FTA) has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. The vibration damage criteria adopted by the FTA are shown in Table 3.13-3, Construction Vibration Damage Criteria.

² Tehachapi General Plan EIR, page 4.7-5.

Table 3.13-3: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12
<i>Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.</i>	

In addition, the FTA has also adopted standards associated with human annoyance for groundborne vibration impacts for the following three land-use categories: (1) Vibration Category 1 – High Sensitivity, (2) Vibration Category 2 – Residential, and (3) Vibration Category 3 – Institutional. The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.

Under conditions where there are an infrequent number of events per day³, the FTA has established thresholds of 65 VdB for Category 1 buildings, 80 VdB for Category 2 buildings, and 83 VdB for Category 3 buildings.

Under conditions where there are an occasional number of events per day⁴, the FTA has established thresholds of 65 VdB for Category 1 buildings, 75 VdB for Category 2 buildings, and 78 VdB for Category 3 buildings. No thresholds have been adopted or recommended for commercial, office, and industrial uses.

³ The Federal Transit Administration, Transit Noise and Vibration Impact Assessment (May 2006) defines “Infrequent Events” as “fewer than 30 vibration events of the same kind per day.” Page 8-3.

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf. Accessed July, 2016.

⁴ The Federal Transit Administration, Transit Noise and Vibration Impact Assessment (May 2006) defines “Occasional Events” as “between 30 and 70 vibration events of the same source per day.” Page 8-3.

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf. Accessed July, 2016.

State Regulations

California State Building Code

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including hotels, motels, dormitories, apartment houses and dwellings other than single-family dwellings. Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB L_{dn} or CNEL in any habitable room.

Title 24 also mandates that for structures containing noise-sensitive uses to be located where the L_{dn} or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment

Local Regulations

City of Tehachapi General Plan Noise Element

Government Code Section 65302(g) requires that a noise element be included in the General Plan of each county and city in the State. The Noise Element of the City of Tehachapi General Plan is intended to provide a framework within which future planning and noise mitigating decisions would be made and implemented. In addition, the Noise Element is intended to provide a set of correlated procedural guidelines and criteria to be used by the City planning and engineering departments to minimize noise conflicts in existing situations and in new developments. Implementation of the Noise Element is to be achieved through improved planning and zoning regulations reflecting quantified noise criteria, development of noise abatement strategies, introduction of noise criteria in the building code, application of noise regulations controlling stationary and moving noise sources, and practical tools which can be used in the day-to-day activities of the City.

The City's Noise Element indicates that sources of noise in the City include railroad operations, vehicular traffic, construction work, commercial operations, human activities, emergency vehicles, and aircraft departures, landings, and overflights. The Noise Element defines the following three noise sensitivity land use classifications in the City:

- Sensitive – Uses where a quiet outdoor environment is important to health and quality of life. This category includes residential uses which feature an outdoor lifestyle;

convalescent uses where the outdoor environment is important and parks which are relaxation-oriented.

- **Conditionally Sensitive** – Uses which are noise-sensitive but which can be made compatible to a more severe noise environment by noise insulation features in building construction, and/or noise abatement techniques of layout, shielding barriers, topography, etc. Uses which can meet the above criteria, under appropriate controlling conditions, include residential uses not featuring outdoor life styles, schools, churches, hotels and general hospitals.
- **Non-sensitive Land Uses** – Uses where a quiet outdoor environment is not critical to indoor or outdoor activities. Included are most commercial uses, industrial uses, parks that are sports oriented, playgrounds, and land devoted to transportation systems. Without implying that noise mitigating considerations are not to be applied in the planning for these land uses, these uses are classified as “non-sensitive.”

The City’s Noise level standards for these three noise sensitivity land use classifications are shown in Table 3.13-4.

Table 3.13-4: Use Sensitivity Noise Standards

Land Use Sensitivity Classifications	Exterior Noise Standard	Interior Noise Standard
Sensitive	L_{dn} 65	L_{dn} 55
Conditionally Sensitive	L_{dn} 75	L_{dn} 55
Non-Sensitive	L_{dn} 75	L_{dn} 75
<i>Source: City of Tehachapi Noise Element, October 1999.</i>		

Applicable Tehachapi General Plan Policies

Community Safety Element

Objective 2 Improve Tehachapi’s Noise environment

Policy CS63 Incorporate noise considerations into planning and development decision-making, and guide the location and design of transportation facilities to minimize the effects of noise on nearby land uses.

Policy CS64 Coordinate the location of new noise-sensitive uses to their appropriate noise-environment to avoid such incompatible situations such as dwellings in areas with projected noise levels greater than 75 dB CNEL.

Where noise-sensitive uses are permitted in areas with 65 dB or greater, require incorporation of mitigation measures to ensure that interior noise levels do not exceed 45 dB CNEL.

Policy CS65 Incorporate the following into Tehachapi's Noise Ordinance:

- a. Require that applicants for new noise-sensitive development in areas subject to noise levels greater than 65 dB CNEL obtain the services of a professional acoustical engineer to provide a technical analysis and design of appropriate mitigation measures;
- b. Limit the maximum noise levels from commercial/industrial development of 75 dB(A);
- c. Require placement of fixed equipment, such as air conditioning units and condensers, inside or in the walls of new buildings or on roof-tops of central units in order to reduce noise impacts on any nearby sensitive receptors;
- d. Maintain appropriate noise-emission standards in connection with the purchase, use, and maintenance of City vehicles;
- e. Require control of noise or mitigation measures for any noise-emitting construction equipment or activity.

Thresholds of Significance

In accordance with Appendix G to the State CEQA Guidelines, the project would have a significant impact on noise if it would cause any of the following conditions to occur:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- Generation of excessive groundborne vibration or groundborne 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, would the project expose people residing or working in the project area to excessive noise levels?

CEQA does not define what constitutes a substantial increase in noise levels. Some guidance is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed changes in ambient noise levels resulting from aircraft operations. The FICON recommendations are based upon studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of the DNL (or CNEL). Annoyance is a summary measure of the general adverse reaction of people to noise that results in speech interference, sleep disturbance, or interference with other daily activities.

As indicated in the City's General Plan, a noise level increase of 3 dB(A) is barely perceptible to most people, a 5 dB(A) increase is readily noticeable, and a difference of 10 dB(A) would be perceived as a doubling of loudness. Based on this information, the following thresholds would apply to permanent increases in noise due to the operational characteristics of development permitted by the proposed General Plan⁵:

- Less than 3 dB(A): not discernable: not significant.
- Between 3 dB(A) and 5 dB(A): noticeable but not significant if noise levels remain below the City of Tehachapi General Plan noise level standards; significant if the noise increase would meet or exceed the City of Tehachapi General Plan noise level standards.
- 5 dB(A) or greater: significant.

Construction Noise and Vibration

There are no state or federal standards that specifically address construction noise or construction vibration. Additionally, the City of Tehachapi General Plan does not specifically provide vibration guidelines or standards. Some guidance is provided by the Caltrans Transportation and Construction Vibration Guidance Manual. The Manual provides guidance for determining annoyance potential criteria and damage potential threshold criteria. These criteria are provided below in Tables 3.13-5 and 3.13-6, and are presented in terms of peak particle velocity (PPV) in inches per second (in/sec).

⁵ Tehachapi General Plan EIR, page 4.10-20.

Table 3.13-5: Guideline Vibration Annoyance Potential Criteria

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	0.1
Severe	2.0	0.4
Source: WVJ Acoustics		

Table 3.13-6: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile, historic buildings, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5
Source: WVJ Acoustics		

Impacts and Mitigation Measures

Impact 3.13-1: *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Construction Noise Impacts

Less Than Significant. Construction noise could occur at various locations within and near the Project site through the build-out period. The distance from the closest noise-sensitive receiver to the Project site is approximately 75 feet along the western edge of the Project where there is an existing residential neighborhood.

The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical and might preclude the kind of construction activities that are to be expected from time to time. Most residents recognize this reality and expect to hear construction activities on occasion.

Table 3.13-7 provides typical construction-related noise levels at distances of 50 feet, 100 feet, and 300 feet. Construction activities would be temporary in nature and would most likely occur only during the daytime hours.

Table 3.13-7: Typical Construction Equipment

Type of Equipment	50 Ft.	100 Ft.	300 Ft.
Backhoe	78	72	62
Concrete Saw	90	84	74
Excavator	81	75	65
Front End Loader	79	73	63
Jackhammer	89	83	73
Paver	77	71	61
Pneumatic Tools	85	79	69
Dozer	82	76	66
Rollers	80	74	64
Scrapers	87	81	71
Portable Generators	80	74	64
Front Loader	86	80	70
Backhoe	86	80	70
Excavator	86	80	70
Grader	86	80	70

Source: FHWA

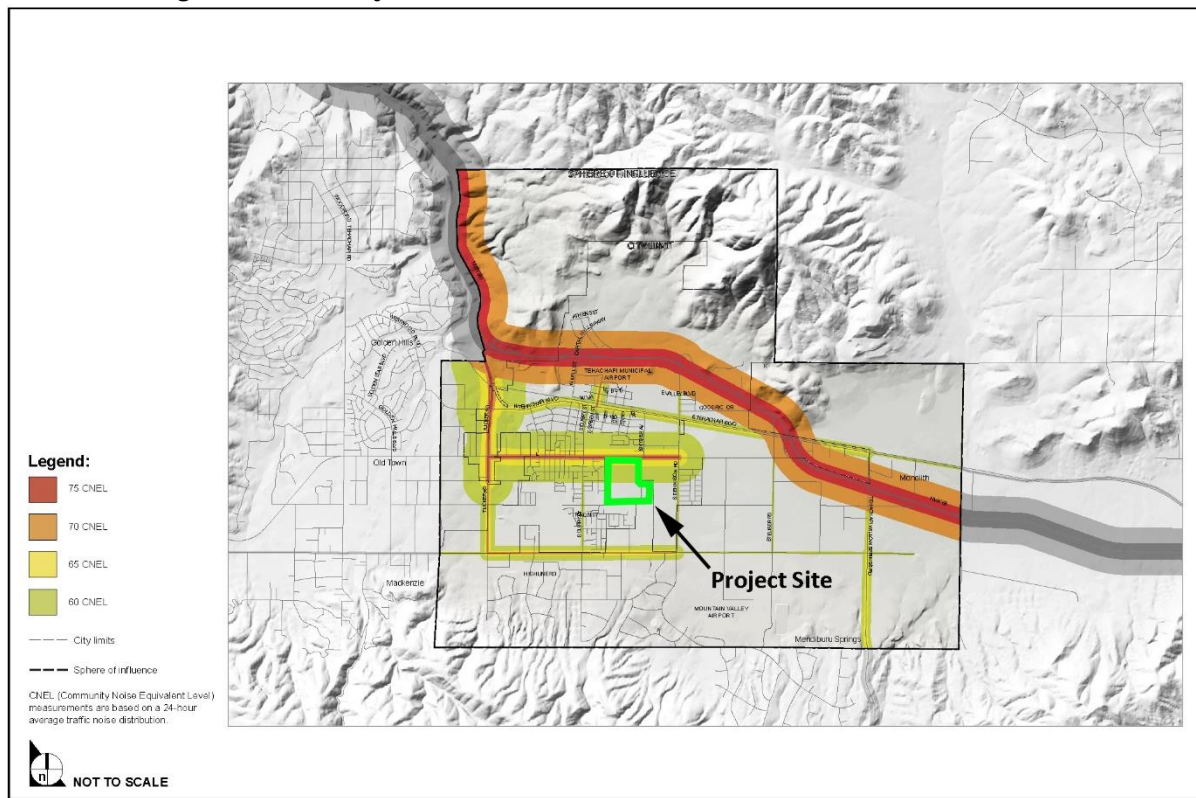
Noise Control for Buildings and Manufacturing Plants, Bolt, Beranek & Newman, 1987

The Project developer and construction contractor will be required to adhere to the City's Noise Ordinance which provides noise guidelines associated with construction. The ordinance limits building construction activities including the operation of any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist between the hours of 7:00 PM and 8:00 AM within a residential zone or within a radius of 500 feet.⁶ These standards are provided to limit noise during sensitive time periods. Therefore, impacts from construction noise are *less than significant*.

Long-Term Operational Noise Impacts

According to the City's General Plan EIR, the major noise sources in Tehachapi are related to roadways and vehicle traffic. The General Plan designates noise contours around areas of the City where noise generally exceeds 60 CNEL (Community Noise Equivalent Level). In the Project area, the roadway generating the most noise is Valley Boulevard. Figure 3.13-1 shows the Project site within the noise contours established by the City's General Plan (2012). At that time, the noise contours were limited to the northern portion of the Project site.

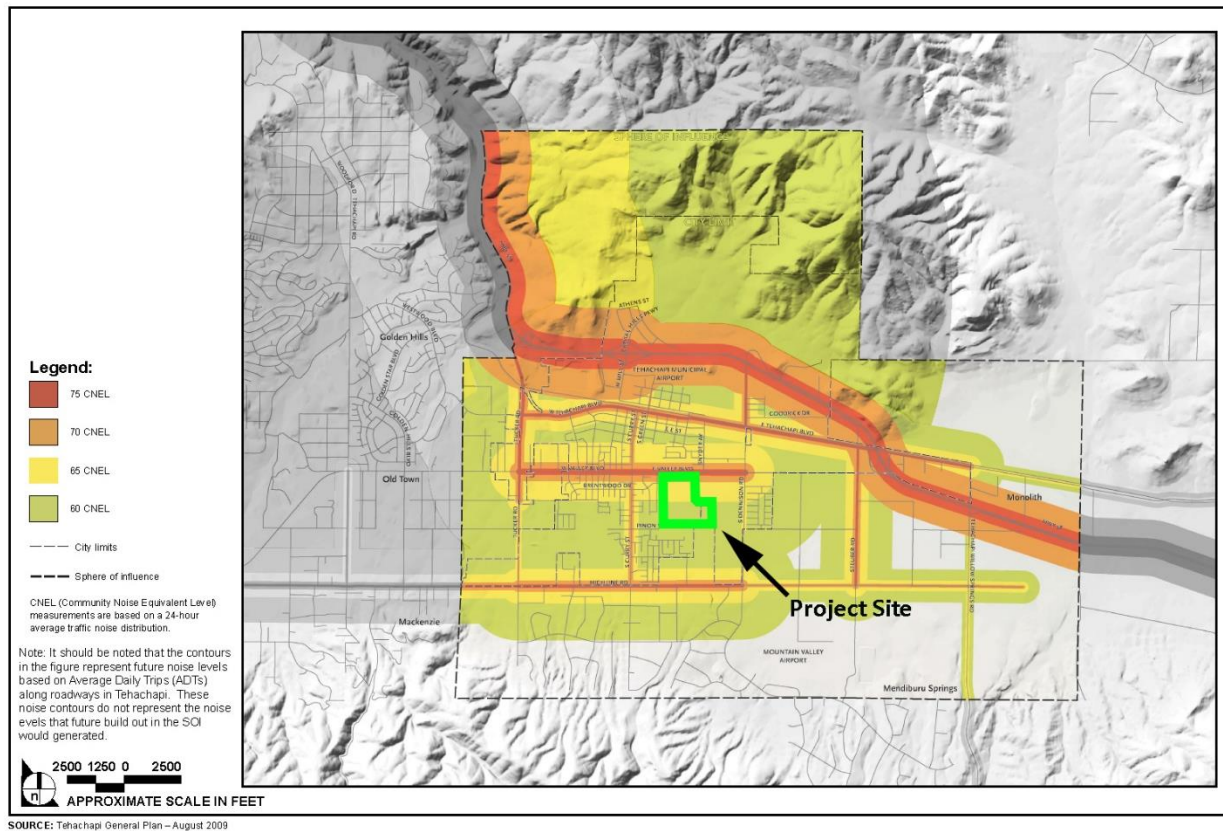
Figure 3.13-1: Project Site Relative To 2012 General Plan Noise Contours



⁶ Tehachapi General Plan Safety Element: Noise, page 2:112.

The City's General Plan projected increases in traffic noise levels associated with future development within the City. Figure 3.13-2 shows the Project site relative to noise contours anticipated under future buildout of the City's General Plan. As shown in the Figure, all of the areas on and around the site will be included within the projected noise contours. The General Plan anticipated that the Project site would be developed with residential housing.

Figure 3.13-2: Project Site Relative To General Plan Buildout (2035) Noise Contours



The site itself is located in an area generally surrounded by development and is adjacent to roadways that are heavily travelled. The Project is expected to generate the types of noise that are typical of residential development, such as yard equipment, air conditioners, amplified sounds, voices and other noises typical of residential neighborhoods. Because of its location in an area consisting of residential neighborhoods, schools and its location within a noise contour, it is not expected that the proposed Project will result in a discernable significant increase in noise to surrounding land uses from non-vehicle noise sources. Noise from vehicles is discussed below.

Roadway Traffic

Traffic noise depends primarily on the speed of traffic and the percentage of truck traffic. Conversely, traffic volume does not have a major influence on traffic noise levels. The primary source of noise from automobiles is high frequency tire noise, which increases with speed. In addition, trucks and older automobiles produce engine and exhaust noise, and trucks also generate wind noise.⁷ There are no truck trips associated with the Project. Local posted speed limits in miles per hour (MPH) in the Project vicinity include:

- Valley Boulevard: 40 MPH
- Dennison Road: 35 MPH
- Curry Street: 35 MPH
- Pinon Street: No posted speed limits
- Snyder Avenue: 25 MPH

Project trip generation is shown in Table 3.17-2, Project Trip Generation in Section 3.17 – Transportation / Traffic. The regional distribution of Project trips were estimated by performing a select zone analysis using available travel models, information from KernCOG, and information from the City. The regional percentage distribution of Project traffic is presented in Figure 3.17-1, Project Trip Distribution Percentages.

Based on Figure 3.17-1, the majority of Project related trips (approximately 85%) will utilize Valley Boulevard to access the site. Traffic disperses to and from Valley Boulevard utilizing Dennison Road (25%), Curry Street (18%), Tucker Road (25%) and to a lesser extent, Snyder Avenue (5%). The remaining trips are distributed among multiple other roadways in the area including Pinon Street (15%).

As previously described, a noise level increase of 3 dB(A) is barely perceptible to most people, a 5 dB(A) increase is readily noticeable, and a difference of 10 dB(A) would be perceived as a doubling of loudness. Based on this information, the following thresholds would apply to permanent increases in noise due to the operational characteristics of development permitted by the proposed General Plan:

- Less than 3 dB(A): not discernable: not significant.

⁷ Tehachapi General Plan EIR, page 4.10-10.

- Between 3 dB(A) and 5 dB(A): noticeable but not significant if noise levels remain below the City of Tehachapi General Plan noise level standards; significant if the noise increase would meet or exceed the City of Tehachapi General Plan noise level standards.
- 5 dB(A) or greater: significant.

According to the City's General Plan EIR, a doubling of sound energy results in a 3 dB(A) increase in sound, which means that a doubling of sound wave energy (e.g., doubling the volume of traffic on a roadway) would result in a barely perceptible change in sound level⁸. Because the Project does not result in a doubling of traffic on the surrounding roadways (See Table 3.17-12 in Section 3.17 – Transportation/Traffic, which shows peak hour Project trips at full buildout compared to existing and projected future traffic trips), it is not anticipated that the Project will result in an increase of 5 dB(A) or greater. This impact is therefore considered **less than significant**.

Mitigation Measures: None are required.

Impact 3.13-2: *Generation of excessive groundborne vibration or groundborne noise levels?*

Less Than Significant. The dominant sources of man-made vibration are sonic booms, blasting, pile driving, pavement breaking, demolition, diesel locomotives, and rail-car coupling. None of these sources are anticipated from the Project site. It is unlikely that vibration from construction activities could be detected at the closest sensitive land uses. Typical vibration levels at distances of 25 feet and 100 feet are summarized by Table 3.13-8.

Table 3.13-8: Typical Vibration Levels During Construction

Equipment	PPV (in/sec)	
	@ 25'	@ 100'
Bulldozer (Large)	0.09	0.011
Bulldozer (Small)	0.003	0.0004
Loaded Truck	0.08	0.01
Jackhammer	0.04	0.005
Vibratory Roller	0.2	.03
Loaded Trucks	0.08	.01
Source: WJV Acoustics. July 2016.		

⁸ Tehachapi General Plan EIR, page 4.10-1.

After full Project build out, it is not expected that ongoing operational activities will result in any vibration impacts at nearby sensitive uses. Any impacts would be less than significant.

Mitigation Measures: None are required.

Impact 3.13-3: *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, would the project expose people residing or working in the project area to excessive noise levels?*

Less Than Significant Impact. The Project is located approximately ¼ mile south of the Tehachapi Municipal Airport. Most of the Project is located within the Kern County Airport Land Use Plan Zone C⁹. Residential projects are allowed in Zone C with a dedication of overflight easement for residential uses. Therefore, there is a *less than significant impact*.

Mitigation Measures: None are required.

⁹ County of Kern Airport Land Use Compatibility Plan (2012), page 4-136.

3.14 Population and Housing

This section of the DEIR evaluates the potential environmental effects related to population and housing associated with implementation of the proposed Project. No comments pertaining to population and housing were received during the NOP public review period.

Environmental Setting

The proposed Project consists of 138 acres of residential development in southeastern Tehachapi in a primarily residential area. The site is designated for residential development by the City's General Plan and is zoned for such use. The Project will include up to 1,000 residential units of varying styles and sizes. The Department of Finance estimates the January 2019 population of the City to be 13,668¹. Tehachapi's population numbers are unique in that they include the population of incarcerated persons in the California Correctional Institution within the City. As of January 2019, the prison had a monthly population of 4,059, which is over the design capacity of 2,783.² Based on the Department of Finance data, the non-incarcerated population of the City is approximately 9,609.

According to the Kern Economic Development Corporation, there are an estimated 37,000 individuals living in the greater Tehachapi region.³ This includes the City of Tehachapi, Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Spring, Monolith, Old Towne and Stallion Springs.

The Department of Finance estimates that as of January 1, 2019, the City has a total of 3,682 housing units (2,427 of those are detached single-family units) with a vacancy rate of 8.61%.⁴ The City averages 2.63 persons per household.

According to the City's General Plan EIR, Kern County has an average growth rate of 3.9 percent with a projected population of about 2.1 million persons by the Year 2050⁵.

¹ <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-4/2010-19/> (accessed July 2019).

² <https://dev-multisite.mystagingwebsite.com/research/wp-content/uploads/sites/9/2019/05/Tpop1d1901.pdf>

³ <http://kedc.com/community-profile/communities-in-kern/tehachapi/> (accessed September 2019).

⁴ <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/> (accessed July 2019).

⁵ Tehachapi General Plan EIR, page 4.11-1.

Regulatory Setting

Federal Agencies & Regulations

US Department of Housing and Urban Development (HUD)

HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes; utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business.⁶

State Agencies & Regulations

California Department of Housing and Community Development (HCD)

HCD's mission is to "[p]rovide leadership, policies and programs to preserve and expand safe and affordable housing opportunities and promote strong communities for all Californians."⁷ "In 1977, the State Department of Housing and Community Development (HCD) adopted regulations under the California Administrative Code, known as the Housing Element Guidelines, which are to be followed by local governments in the preparation of local housing elements. AB 2853, enacted in 1980, further codified housing element requirements. Since that time, new amendments to State Housing Law have been enacted.

State Housing Law also mandates that local governments identify existing and future housing needs in a Regional Housing Needs Assessment (RHNA).

California Relocation Assistance Act

The State of California adopted the California Relocation Assistance Act (*California Government Code* §7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public programs and projects. This State law calls for fair, uniform, and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

⁶ U.S. Department of Housing and Urban Development, Mission, <http://portal.hud.gov/hudportal/HUD?src=/about/mission>.

⁷ California Department of Housing and Community Development, Mission, <http://www.hcd.ca.gov/mission.html>.

Local Agencies & Regulations

City of Tehachapi 2015 – 2023 Housing Element

California Housing Element law requires every jurisdiction to prepare and adopt a housing element as part of a City's General Plan.

State Housing Element requirements are framed in the California Government Code, Sections 65580 through 65589, Chapter 1143, Article 10.6. The law requires the State Department of Housing and Community Development (HCD) to administer the law by reviewing housing elements for compliance with State law and by reporting its written findings to the local jurisdiction. Although State law allows local governments to decide when to update their general plans, State Housing Element law mandates that housing elements be updated every eight years. The City's Housing Element contains information on housing needs, land inventory, constraints, and a program of action.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- *Induce substantial unplanned population growth in an area, either directly or indirectly?*
- *Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (Note: This topic was addressed in the Project's Initial Study and is not addressed further here. Please refer to the Initial Study in Appendix A for a discussion on this topic.)*

Impacts and Mitigation Measures

Impact 3.14-1: *Induce substantial unplanned population growth in an area, either directly or indirectly?*

Less Than Significant Impact. Project implementation will have a direct, growth inducing impact on the area's population and housing stock by facilitating the development of up to 1,000 new households within the City of Tehachapi. The proposed Project is anticipated to be developed over a 7-year period with an average of 143 units built per year. As discussed previously, the City averages 2.63 persons per household, which could result in an increase of approximately 2,630 people at full Project buildout. The City's current population of 9,609 non-incarcerated persons would be increased by approximately 27% to 12,239 from the Project.

For purposes of evaluating the environmental impact of population growth in Tehachapi under CEQA, the question becomes whether or not the Project will induce population beyond what the

City has or will plan for and/or can accommodate at full buildout of the Project. The assessment takes into account Project-related impacts to topics like traffic, water supply, public services (police, fire, etc.), sewer / storm drain capacity, and other related topics.

The City's General Plan provided estimates of residential housing and population growth within the City through 2035. According to the General Plan, the City can accommodate a total of 5,319 housing units in the Planning Area and a population of 14,201 non-incarcerated residents by Year 2035.⁸ See Table 3.14-1.

Table 3.14-1: Population Estimates

Existing Population (2019)	Proposed Project Population	Existing Plus Project Population	General Plan 2035 Projected Population
9,609*	2,630	12,239*	14,201*
* excludes prison population			

The Department of Finance estimates that as of January 1, 2019, the City has a total of 3,682 housing units (2,427 of those are detached single-family units) with a vacancy rate of 8.61%.⁹ See Table 3.14-2.

Table 3.14-2: Residential Units

Existing Units (2019)	Proposed Project # of Units	Existing Plus Project # of Units	General Plan 2035 Projected Buildout # of Total Units
3,682	1,000	4,682	5,319

The City's Housing Element (2015 – 2023) contains data pertaining to anticipated housing needs in the City. According to the Housing Element, the City has an existing need for 483 housing

⁸ Tehachapi General Plan Final EIR, page 2.0-2.

⁹ <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/> (accessed July 2019).

units¹⁰ ranging in categories from “Very Low” to “Above Moderate” income category housing needs. The Project contains a mixture of detached single-family homes and multi-family units which will assist the City in meeting some of its Housing Element goals and requirements.

As shown in the tables above, the anticipated population and housing unit increase associated with the proposed Project is within the growth projections of the City’s 2035 General Plan.

The environmental impacts of Project-induced population growth within the City is evaluated within this EIR in other sections (e.g. air quality, traffic, noise, water use, biological impacts, etc.). For instance, Project-related impacts to the local water supply are addressed in the Project’s Water Supply Assessment as well as in Section 3.10 – Hydrology; sewer/storm drain impacts are addressed in Section 3.19 – Utilities; and police/fire/school impacts are described in Section 3.15 – Public Services. Please refer to those individual sections as well as other sections for specific discussions on Project-related impacts in relation to cumulative population effects on the City and surrounding area.

Based on the City’s General Plan, infrastructure master planning documents, and the City’s Housing Element, it is determined that the proposed Project will not induce unplanned population growth beyond that which can be accommodated by the City. It has been determined that the City has adequate capacity to serve the Project and therefore, the Project will have a *less than significant* impact occurring from inducement of unplanned population.

Mitigation Measures: None are required.

¹⁰ Tehachapi Housing Element (2015 – 2023), page 44.

3.15 Public Services

This section of the DEIR identifies potential impacts associated with the City's police/fire protection services, school facilities, and other public facilities. No IS/NOP comment letters were received pertaining to this topic.

Environmental Setting

Fire Services

The City of Tehachapi provides firefighting and emergency response service through a contract with the Kern County Fire Department (KCFD). The KCFD operates Fire Station 12 at 800 South Curry Street, which provides a central location within the City. Station 12 consists of 2 fire engines, 1 patrol vehicle, and 3 firefighters per shift. In addition to Station 12, KCFD provides emergency response service in neighboring Golden Hills (Station 13), Bear Valley Springs (Station 16) and Stallion Springs (Station 18). Each station supports the other as necessary and, because the KCFD operates all the stations, the staffing and operations are seamless. This mutual support is critically important particularly given the rural and remote physical conditions of the Tehachapi Valley and Tehachapi itself.

The Insurance Service Office (ISO)—a private organization that surveys fire departments in cities and towns across the United States—rates Station 12 as Class 5 for most of the City (1 being highest and 10 being lowest). For some portions of the City, the KCFD received a rating of Class 9 and 10. This rating considers a community's fire defense capacity versus fire potential, and then uses the score to set property insurance premiums for homeowners and commercial property owners.¹

Police Services

The Tehachapi Police Department (TPD) is the local law enforcement agency for the City of Tehachapi. The TPD is located at 220 west "C" Street. The TPD provides 24-hour police services within the City limits.

The TPD opened its own dispatch center in June 2016 and began taking its own calls from the public 24 hours a day. Previously, calls were routed through the Bear Valley Police Department's dispatch center.

¹ Tehachapi General Plan EIR, page 4.12.1-1.

The Police Station is staffed by 17 sworn officers plus support staff² and is responsible for the area within Tehachapi's Sphere of Influence.

The TPD does not have adopted service standard for police protection services. The Federal Bureau of Investigation (FBI) recommends a planning standard of 2.0 officers per 1,000 residents to determine adequate staffing levels.

The California Highway Patrol (CHP) provides services throughout the Tehachapi Valley on State highways and unincorporated roadways. The CHP provides traffic regulation enforcement, oversees response to emergency incidents on California's highways, and promotes the safe and efficient movement of people and goods on California highways to minimize loss of life, injuries, and property damage. State Highways that pass through the City include State Route 58 and State Route 202. The closest CHP office is located at 1365 Highway 58 in Mojave.

Schools

The Tehachapi Unified School District (TUSD or District) encompasses an area of 522 square miles with a student enrollment of about 4,900 students in Kindergarten through the 12th grade. The district operates three elementary schools, one middle school, an alternative education center and one high school.³ Tehachapi High School is located immediately east of the proposed Project.

Parks

Tehachapi currently provides approximately 16 acres of parkland within town and approximately 537 acres of natural open space for a total of approximately 553 acres.⁴ Another 7,104 acres of 'rural' open space in nature and agriculture is located in the City's Sphere of Influence. Parkland within the town consists of nine parks. The Tehachapi Valley Recreation and Parks District (TVRPD) owns and maintains two of the parks, while the City of Tehachapi owns and maintains the other seven parks. The TVRPD does not have adopted service standards for parks. As described in the Project Initial Study / Notice of Preparation (Appendix A), Section 3.10.030 of the City's Zoning Code requires that any site over 120 acres must be master planned with one or more pedestrian sheds to determine neighborhood centers. As shown in Chapter Two – Project Description, the Project includes a total of 5 pedestrian sheds, all civic space, within the

² <http://ca-tehachapicityhall.civicplus.com/directory.aspx?did=9> (accessed August 2019).

³ <https://www.teh.k12.ca.us/domain/70> (accessed August 2019).

⁴ Tehachapi General Plan EIR. Page 4.12.4-1.

Project. For the proposed Project, the Applicant is providing a total amount of civic space in excess of the 5% required by the City's land use documents. The minimum park space required for the Project is 6.9 acres (5% of 138 acres), however, the Project includes approximately nine (9) acres of parks. National Park standards recommend that five acres per 1,000 residents be dedicated to meet park demand. Based on current population of the City, existing park facilities are sufficient⁵ and will remain so after the addition of the Project's population and park acreage.

Libraries

The Kern County Library leases building space at 212 Green Street in the City of Tehachapi to provide library services in the Tehachapi area. The library facility is approximately 10,000 square feet in size.

The library does not have adopted service standard for library services. The American Library Association recommends a planning standard of 0.6 square feet per capita to determine adequate library space.⁶ Based on the current population of the City of Tehachapi (9,600 people), the existing library building exceeds this requirement by thousands of square feet, even with the addition of the proposed Project.

Regulatory Setting

State Regulations

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment," the California Occupational Safety and Health Administration (Cal- OSHA) has established minimum standards for fire suppression and emergency medical services (EMS). The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance and use of all firefighting and emergency medical equipment.

City Emergency Response/Evacuation Plans

⁵ Ibid.

⁶ Tehachapi General Plan EIR, page 4.12.5-1.

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

California Fire Code

The California Fire Code (CFC) contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The CFC also contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise buildings, childcare facility standards, and fire suppression training.

Local

Kern County Code of Building Regulations

The purpose of the County's Code of Building Regulations (2003) is the promotion of public safety and welfare throughout the unincorporated territory of the County. Elements for fire hazard mitigation include the Fire Code (Title 17.32) and Urban Wildland Interface Code (Title 17.34).

Kern County Fire Department Wildland Fire Management Plan

The Kern County Fire Department Wildland Fire Management Plan (2004) assesses the wildland fire situation throughout the State Responsibility Area (SRA) within the County. The goal of the Plan is to reduce the costs and losses from wildfire by protecting assets at risk through focused pre-fire management prescriptions and increasing initial fire attack success.

Kern County Multi-Hazard Mitigation Plan

The purpose of the Kern County Multi-Hazard Mitigation Plan (2005) is to reduce or eliminate long-term risk to people and property from natural hazards including fire and their effects in the County. This plan was prepared to meet the Disaster Mitigation Act of 2000 requirements in order to maintain the County's eligibility for FEMA Pre-Disaster Mitigation (PDM) and Hazard Mitigation Grant Programs (HMGP). This plan lays out the strategy that will enable the County to become less vulnerable to future disaster losses.

Tehachapi General Plan Policies

Community Safety Element

Objective 13 Support Tehachapi's environment and character through appropriately ready and staffed Fire and Police Departments.

Policy CS52 Optimize firefighting, emergency response and police capabilities through the following as appropriate:

- a. Continued improvement of existing facilities and adequate staffing in response to land use and development activity;
- b. Involvement of fire and police staff in the land use/development permit process.

Policy CS53 Improve emergency response time through the following as appropriate:

- a. Increasing firefighting and support staff resources;
- b. To the extent feasible, add fire station(s) in development areas to assure consistent response times throughout Tehachapi. At a minimum, any development in subarea 5B requires an additional fire station - including on-site staffing and equipment;
- c. Require the funding of new services from fees, assessments, or taxes as development permits are approved per a nexus study that is used to implement a citywide impact fee.

Policy CS54 Maintain a ready SEMS plan (State of California's Standardized Emergency Management System) through the following:

- a. Annually, review and update the plan as needed;

- b. Prepare, coordinate, publish, and distribute any changes to all involved jurisdictions or agencies per the records revision page of the plan.
- c. Periodically provide training for Tehachapi staff on SEMS.

Policy CS55 Increase public access to police services through the following as appropriate and practical:

- a. Increase police staffing to coincide with increasing population, development, and calls for service;
- b. Increase community participation through programs such as Citizens Emergency Response Team, Neighborhood Watch, Volunteers in Policing Program;
- c. Require the funding of new services from fees, assessments, or as development permits are approved per a nexus study that is used to implement a citywide impact fee;
- d. Provide education to community groups and to schools about specific safety concerns such as senior-targeted fraud and property crimes.

Policy CS56 Operate the Downtown police storefront to maintain a visible presence to visitors as well as to have a central location in addition to the Police Station.

Policy CS57 Within the context of a pedestrian-oriented, small town, promote the use of defensible space concepts (site and building lighting, visual observation of open space, secured areas, and so on) in project design to enhance public safety.

Policy CS58 As part of the land use/development permit process, incorporate the following as appropriate and practical:

- a. Assessment of the impacts of new development on the level of police and fire services provided to the community; an impact fee to provide public safety should be considered for projects that have significant impacts to existing police and fire services;
- b. Analysis of site plan layout in terms of defensible space for new developments in the Land use/development permit process;

- c. Require that fire and public hazards be eliminated or reduced to acceptable levels;
- d. Require site design features, fire retardant building materials, and adequate egress systems as conditions for approval of development or improvements to reduce the risk of fire.

Policy CS59 Develop and/or expand existing education programs addressing personal safety awareness, such as neighborhood watch and commercial association watch/protection programs.

Methodology

The analysis considered potential impacts to public services based on full buildout of the site as proposed. Various databases, planning documents, and maps were reviewed to assist in the environmental evaluation. Specific references are noted in the text.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

Impacts and Mitigation Measures

Impact 3.4-1: *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order*

to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

Less Than Significant With Mitigation. The Project consists of a relatively dense 1,000 unit housing development on 138 acres in an area characterized by existing residential housing, churches, and Tehachapi High School. As with other areas of the City, the Project will require fire and police protection services. The Project will also increase student enrollment in the local school district and will potentially increase the use of public parks. These topics are addressed individually below.

Fire Protection

Fire protection services would be required to serve the proposed Project. As previously described, the City of Tehachapi provides firefighting and emergency response service through a contract with the Kern County Fire Department (KCFD). The KCFD operates Fire Station 12 at 800 South Curry Street, which is approximately 600 feet west of the Project boundary. Station 12 consists of 2 fire engines, 1 patrol vehicle, and 3 firefighters per shift.

KCFD provides a summary of fire service activities within the City in their Annual Reports. According to the most recent available report (2015), Fire Station 12 had a total of 912 fire service incidents (44 fires, 541 medical aids, 67 service calls, 51 hazardous condition calls, and a variety of other incidents such as false alarms, good intent calls, etc.).⁷

The proposed Project is anticipated to be developed over a 7-year period with an average of 143 units built per year. As discussed previously, the City averages 2.63 persons per household, which could result in an increase of approximately 2,630 people at full Project buildout. The City's

⁷ <https://www.kerncountyfire.org/about-us/annual-report/book/19-kcfd-2015-annual-report/2-annual-reports.html> (accessed August 2019).

current population of 9,609 non-incarcerated persons would be increased by approximately 27% to 12,239 from the Project.

In order to maintain adequate levels of fire protection, KCFD will need to increase its resources to serve the Project. Tehachapi's Community Safety Element requires the expansion of fire service to meet identified response times. The City has a number of General Plan policies which assist in the establishment of fire protection. Specifically, Policy CS53 (b) and (c), which states: (b) "To the extent feasible, add fire station(s) in development areas to assure consistent response times throughout Tehachapi. At a minimum, any development in subarea 5B requires an additional fire station - including on-site staffing and equipment; (c) Require the funding of new services from fees, assessments, or taxes as development permits are approved per a nexus study that is used to implement a citywide impact fee."

In addition, Policy CS58 (a-d) requires: "As part of the land use/development permit process, incorporate the following as appropriate and practical: (a) Assessment of the impacts of new development on the level of police and fire services provided to the community; an impact fee to provide public safety should be considered for projects that have significant impacts to existing police and fire services; (b) Analysis of site plan layout in terms of defensible space for new developments in the Land use/development permit process; (c) Require that fire and public hazards be eliminated or reduced to acceptable levels; (d) Require site design features, fire retardant building materials, and adequate egress systems as conditions for approval of development or improvements to reduce the risk of fire."

The Project Site Plan will be reviewed by Kern County Fire to ensure that the Project meets or exceeds local and state standards for fire-related components such as adequate emergency access, location of fire hydrants, adequate defensible space around the site, use of fire retardant materials, etc. In addition, the proposed Project will be required to pay fire service impact fees from new development based on projected impacts from the development. This fee will be determined by KCFD. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund capital and labor costs associated with fire protection services. This is identified in Mitigation Measure PUB-1.

The proposed Project does not trigger the need for a fire station or expansion of existing facilities at this time. Development of a fire station will require environmental review when it is proposed, and the environmental review will determine if there will be an adverse physical impact associated with its construction pursuant to CEQA. A new fire station is not proposed at this time,

and the proposed Project would not directly result in the need for the construction of new fire facilities; thus, the Project will have a less than significant impact relative to this topic.

Police Protection

Police protection services would be required to serve the proposed Project. The City's Police Station is located at 220 west "C" Street and is staffed by 17 sworn officers plus support staff.⁸ The TPD does not have adopted service standard for police protection services. The Federal Bureau of Investigation (FBI) recommends a planning standard of 2.0 officers per 1,000 residents to determine adequate staffing levels.

The Project will include up to 1,000 residential units of varying styles and sizes. The Department of Finance estimates the January 2019 population of the City to be 13,668⁹. Tehachapi's population numbers are unique in that they include the population of incarcerated persons in the California Correctional Institution within the City. As of January 2019, the prison had a monthly population of 4,059, which is over the design capacity of 2,783.¹⁰ Based on the Department of Finance data, the non-incarcerated population of the City is approximately 9,609. Based on a population of 9,609, the City currently provides approximately 1.8 police officers per 1,000 residents.

The proposed Project is anticipated to be developed over a 7-year period with an average of 143 units built per year. As discussed previously, the City averages 2.63 persons per household, which could result in an increase of approximately 2,630 people at full Project buildout. The City's current population of 9,609 non-incarcerated persons would be increased by approximately 27% to 12,239 from the Project.

In order to maintain the current ratio of 1.8 officers per 1,000 residents, the Project would require an additional 4.7 police officers to serve the Project.

The City's Community Safety Element requires the expansion of police service to meet identified response times. The City of Tehachapi has a number of General Plan policies which assist in the establishment of police protection. Specifically, Policy CS 55 (a) and (c) which states: (a) "Increase police staffing to coincide with increasing population, development, and calls for service; (c)

⁸ <http://ca-tehachapicityhall.civicplus.com/directory.aspx?did=9> (accessed August 2019).

⁹ <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-4/2010-19/> (accessed July 2019).

¹⁰ <https://dev-multisite.mystagingwebsite.com/research/wp-content/uploads/sites/9/2019/05/Tpop1d1901.pdf>

Require the funding of new services from fees, assessments, or as development permits are approved per a nexus study that is used to implement a citywide impact fee.”

In addition, Policy CS58 (a) requires: “As part of the land use/development permit process, incorporate the following as appropriate and practical: (a) Assessment of the impacts of new development on the level of police and fire services provided to the community; an impact fee to provide public safety should be considered for projects that have significant impacts to existing police and fire services.”

The proposed Project will be required to pay police service impact fees from new development based on projected impacts from the development. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund capital and labor costs associated with police protection services. This is identified in Mitigation Measure PUB-2.

The proposed Project does not trigger the need for a police station or expansion of existing facilities at this time. Development of a police station will require environmental review if and when it is proposed, and the environmental review will determine if there will be an adverse physical impact associated with its construction pursuant to CEQA. A new police station is not proposed at this time, and the proposed Project would not directly result in the need for new police facilities; thus, the Project will have a less than significant impact relative to this topic.

Schools

The proposed Project will include up to 1,000 dwelling units to be developed over a 7-year period with an average of 143 units built per year. As discussed previously, the City averages 2.63 persons per household, which could result in an increase of approximately 2,630 people at full Project buildout. According to the City’s General Plan EIR, the TUSD uses a student yield factor of 0.467 students per dwelling unit. With 1,000 units, this would result in the addition of approximately 467 new students in the District.

Funding for schools and school facilities impacts is outlined in Education Code Section 17620 and Government Code Section 65995 et. seq., which governs the amount of fees that can be levied against new development. These fees are used to construct new or expanded schools facilities. Payment of fees authorized by the statute is deemed “full and complete mitigation.”

The proposed Project will be required to pay impact fees from new development based on the Developer Fee rates that are in place at the time payment is due. The payment amount is determined by the School District and the State Allocation Board (SAB) who sets the maximum

per-square-foot Level 1 school impact fees every two (even) years at its January meeting. Payment of the applicable impact fees by the Project applicant would fund capital and labor costs associated with providing school services to the Project. The Project will be required to pay its the school impact fee as a condition of approval. This is identified in Mitigation Measure PUB-3.

Parks

The proposed Project consists of 138 acres of residential development in southeastern Tehachapi in a primarily residential area. Section 2.10.030 of the Tehachapi Zoning Code requires that any site over 120 acres must be master planned with one or more pedestrian sheds to determine neighborhood centers.

A pedestrian shed is defined as an area encompassed by the 5-minute walking distance from a town or neighborhood center. That area is typically represented by a quarter mile circle originating from the central location or locations. Those centers typically include civic space or commercial business areas.

The Site Plan/Pedestrian Shed map (See Figure 2-4) shows a total of 5 pedestrian sheds, all civic space, within the Project. The sheds overlap indicating that for many of the proposed properties multiple centers of activity are within walking distance.

The Applicant has also provided a total amount of civic space in excess of the 5% required by the City's land use documents. The minimum park space required for the Project is 6.9 acres (5% of 138 acres), however, the Project includes approximately nine (9) acres of parks. Figure 2-4 also shows the location of the proposed parks within the development. A variety of park space is being proposed as follows:

- 3.8 acre Central Park
- 3.4 acre Youth Sports Park / Detention Basin
- 0.6 acre Garden Park
- 0.6 acre Neighborhood Park
- 0.4 acre Organic Garden
- Various pocket parks throughout

The parks and pedestrian sheds will be open to the public. Because the Project includes more than the required civic space, the impact is determined to be less than significant.

Mitigation Measures:

- PUB-1:** Prior to issuance of building permits, the Project Applicant shall pay fire service impact fees for new development. The fee, or equivalent in-lieu, will be determined by the Kern County Fire Department in conjunction with the City of Tehachapi.
- PUB-2:** Prior to issuance of building permits, the Project Applicant shall pay police service impact fees for new development. The fee, or equivalent in-lieu, will be determined by the City of Tehachapi.
- PUB-3:** Prior to issuance of building permits, the Project Applicant shall pay school impact fees. The State Allocation Board sets the maximum per-square-foot Level 1 school impact fees every two years (even) that is imposed on new development. The Project's school impact fees will be determined by the Tehachapi Unified School District.

3.17 Transportation/Traffic

This section of the DEIR identifies potential impacts of the proposed Project pertaining to transportation and traffic in and around the Project vicinity. No IS/NOP comment letters were received pertaining to this topic. The information and analysis presented in this Section are based on the Traffic Impact Study prepared for the Project which is included as Appendix E.

Environmental Setting

The proposed Project site is located in the southeastern area of Tehachapi, southeast of downtown in an area that generally consists of single-family housing, multi-family housing, schools and churches. The 138-acre site is bounded by Valley Boulevard to the north, Tract 6212 to the west, Pinon Street to the south and Tehachapi High School to the east.

The site is currently zoned T-4 (General Urban) and is designated by the General Plan as 4B – Southern Neighborhoods. The site is vacant / undeveloped and is generally void of vegetation except for grass/weeds and scrub brush.

Major roads in the Project area include:

Valley Boulevard is an east-west roadway designated as a major arterial and a transit corridor in the Tehachapi General Plan. A majority of the existing roadway consists of one lane in each direction. Areas of development and widening, including curb, gutter, and sidewalk, are interspersed with narrow segments of roadway adjacent to less-developed, rural-type settings. Posted speed limits of 40 MPH were observed. Valley Boulevard is State Route 202 west of Tucker Road.

Pinon Street is an east-west roadway designated as a minor arterial (collector) in the Tehachapi General Plan. Pinon Street terminates approximately 1,700 feet west of Curry Street and approximately 3,000 feet east of Curry Street, so it has not yet been fully developed through Tehachapi. Pinon Street consists of one lane in each direction. Posted speed limits were not observed.

Dennison Road is a north-south roadway designated as a major arterial and a transit corridor in the Tehachapi General Plan. The roadway consists of one lane in each direction with a posted speed limit of 35 MPH.

Curry Street is a north-south roadway designated as a minor arterial (collector) and a transit corridor in the Tehachapi General Plan. The roadway consists of one lane in each direction with a posted speed limit of 35 MPH south of C Street. Within the study area

Curry Street terminates at Tehachapi Boulevard. Speed limits are not posted north of C Street, where a prima facie speed limit of 25 MPH would likely apply.

There are two airports in Tehachapi: The Tehachapi Municipal Airport (public airport near central Tehachapi) and the Mountain Valley Airport (private airport used for glider operations).¹

Regulatory Setting

Several federal regulations govern transportation issues. They include:

- Title 49, CFR, Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.
- 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.
- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

State of California Transportation Department Transportation Concept Reports

Each District of the State of California Transportation Department (Caltrans) prepares a Transportation Concept Report (TCR) for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of the TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period, otherwise known as the "route concept" or beyond 20 years, for what is known as the "ultimate concept".

The TCR's concept LOS for the 20-year planning horizon for SR 58 is C.

Kern County Regional Transportation Plan

The Kern County Regional Transportation Plan is a long-range planning document used for identifying and prioritizing long-range transportation improvements over a 25-year period. The

¹ Tehachapi General Plan EIR, page 4.7-5.

RTP includes programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight and finances. The RTP must be revised at least every four years, as the County is designated as non-attainment for federal air quality standards.

Airport Land Use Compatibility

Kern County Airport Land Use Compatibility Plan

The Kern County Airport Land Use Compatibility Plan (ALUCP) has been prepared to establish procedures and criteria by which Kern County and the affected incorporated cities can address compatibility issues when planning and discussing airports and the land uses around them. The Plan addresses all properties on which land uses could be affected by present or future aircraft operations at 16 airports, including the Tehachapi Municipal Airport and the Mountain Valley Airport.² The ALUCP is enforced locally by the City of Tehachapi.

City of Tehachapi General Plan Policies

Mobility Element

Objective 1 Connect as many streets as possible.

Policy 1 Require new through-roadways where necessary for additional connections and congestion relief.

Policy 2 Extended bicycle and equestrian routes.

Policy 3 Increase regional roadway connections to improve mobility.

Objective 2 Coordinate street function to exhibit a hierarchy of streets

Policy 2 Reserve or acquire right of way for future roadway improvements consistent with the Mobility Element.

Objective 3 Coordinate a level of service that responds to physical context.

Policy 1 Maintain / generate context-related level of service standards for each street type within Tehachapi's SOI.

Objective 4 Fund roadway improvements from a variety of sources.

² Ibid, page 4.7-16.

Policy 1 Require new development to pay its fair share of transportation improvements per the Mobility Element.

Policy 2 Generate a near- and long-term strategy for identifying and applying for state and federal transportation funds.

Policy 3 Generate a local funding source for transportation maintenance.

Objective 5 Correspond traffic-control devices to their physical context.

Policy 1 Promote the use of stop signs, road diets (i.e. reconfiguration of existing oversized streets), or roundabouts on secondary and locals streets as practical.

Policy 2 Implement traffic signals only when other traffic control measures are determined by the City to be inappropriate or unadvisable.

Policy 3 Generate a local funding source for transportation maintenance.

Objective 6 Enhance regional transportation access.

Policy 1 Develop interjurisdictional cooperative agreements with neighboring cities and counties that clearly define the roles and responsibilities of each agency with respect to transportation infrastructure.

Policy 2 Pursue grade-separated North-South crossing of railroad.

Policy 3 Generate a strategy for funding and constructing rail crossing improvements.

Thresholds of Significance

In accordance with the CEQA Guidelines, a project impact would be considered significant if the project would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

- Result in inadequate emergency access?

Analysis Methodology

Peters Engineering, Inc. prepared a Traffic Impact Study (TIS) (see Appendix E) analyzing potential impacts the proposed Project would have on the existing roadway and transportation system. This was prepared in general conformance with City of Tehachapi requirements and *Caltrans Guide for the Preparation of Traffic Impact Studies* dated December 2002. The TIS provides an analysis of the surrounding roadway system and the effects of the proposed Sage Ranch Project on the existing and planned roadway infrastructure, including potential mitigation measures to reduce Project transportation impacts. Study results are summarized in the text below. For the full text, graphics, and traffic counts, please refer to Appendix E.

Intersection Analysis

The levels of service at the study intersections were determined using the computer program Synchro 9, which is based on the HCM2010 procedures for calculating levels of service.

Although peak-hour traffic volumes are typically utilized in the operational analysis of intersections, the HCM2000 utilizes the peak 15-minute period as the basis for operational analyses by incorporating the peak hour factor (PHF) into the analyses. PHFs for the existing-conditions and existing-plus-Project conditions analyses were determined based on the existing traffic volumes. It is typical traffic engineering practice based on previous versions of the Highway Capacity Manual to assume a PHF of 0.92 in urban areas and 0.88 in rural areas in the absence of field data. For purposes of the year 2040 analyses performed for this study, in which future traffic growth is projected and field data is not available, a PHF of 0.92 is used unless the existing PHF is greater than 0.92.

For signalized intersections and all-way-stop-controlled intersections, the overall intersection LOS and the average delay per vehicle are presented. For one-way and two-way stop-controlled intersections an overall intersection LOS is not defined in the HCM2000. Therefore, for one-way and two-way stop-controlled intersections the LOS and average delay per vehicle for the movement with the greatest delay is reported.

Traffic Signal Warrants

The California State Transportation Agency and California Department of Transportation *California Manual on Uniform Traffic Control Devices, 2014 Edition (Revision 4 dated March 29, 2019)*

(CMUTCD) presents various criteria (warrants) for determining the need for traffic signals. The CMUTCD states that an engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of a traffic control signal is justified at a particular location.

The CMUTCD provides the following warrants to investigate the need for a traffic control signal, as applicable:

Warrant 1, Eight-Hour Vehicular Volume.

Warrant 2, Four-Hour Vehicular Volume.

Warrant 3, Peak Hour.

Warrant 4, Pedestrian Volume.

Warrant 5, School Crossing.

Warrant 6, Coordinated Signal System.

Warrant 7, Crash Experience.

Warrant 8, Roadway Network.

Warrant 9, Intersection Near a Grade Crossing

The installation of a traffic signal can serve as a mitigation measure when a significant impact is identified at an unsignalized intersection and traffic signal warrants are satisfied. If warrants are not satisfied, traffic signals would not necessarily be considered as a feasible mitigation measure, unless other data is presented to justify a traffic signal. Since the analyses presented herein are based on peak hour traffic volumes, Figure 4C-4, Warrant 3, Peak Hour as presented in the CMUTCD was utilized to evaluate the possibility that traffic signals may be warranted at study intersections not currently signalized.

For cases in which peak hour traffic signal warrants are satisfied, traffic signals are not considered to be the default mitigation measure. Since installation of traffic signals typically includes construction of additional lanes or widening of the intersection, the development of recommendations for mitigation measures includes consideration of widening the intersection to add capacity while maintaining stop sign control. If the addition of lanes results in acceptable levels of service then the installation of traffic signals is considered to be over-mitigation and is not recommended even if peak-hour traffic signal warrants are satisfied.

Analysis Locations

The study locations were determined based on discussions with City of Tehachapi staff based on the anticipated volume and distribution of Project trips. The report includes operational analysis of the following intersections:

1. Tehachapi Boulevard / Tucker Road (State Route 220)
2. Tehachapi Boulevard / Mt. View Avenue
3. Tehachapi Boulevard / Curry Street
4. Tehachapi Boulevard / Green Street
5. Tehachapi Boulevard / Snyder Avenue
6. Tehachapi Boulevard / Dennison Road
7. Valley Boulevard / Tucker Road
8. Valley Boulevard / Mt. View Avenue / Aspen Drive
9. Valley Boulevard / Curry Street
10. Valley Boulevard / Snyder Avenue
11. Valley Boulevard / Dennison Road
12. Pinon Street / Curry Street
13. Highline Road / Curry Street
14. Highline Road / Dennison Road

Analysis Time Periods and Scenarios

The study time periods include the peak hours determined within each of the following time periods:

- A.M. Peak hour: 7:00 a.m. to 9:00 a.m.
- P.M. Peak Hour: 4:00 p.m. to 6:00 p.m.

The peak hours are analyzed for the following conditions:

- Existing Conditions;
- Existing-Plus-Project Conditions;

- Near-Term With-Project Conditions (includes pending and approved projects)
- Cumulative Year 2040 No-Project Conditions; and
- Cumulative Year 2040 With-Project Conditions.

Local Thresholds of Significance

Policy M6 of the Tehachapi General Plan Mobility Element indicates that the City shall maintain / generate context-related level of service standards for each street type within Tehachapi's sphere of influence. The General Plan discusses several road classifications with a corresponding range of optimal levels of service as summarized in Table 3.17-1.

Table 3.17-1
Optimal Level of Service for Thoroughfares in Tehachapi

Thoroughfare	Optimal LOS Range
Road (Major Arterial)	A-C
Boulevard (Major Arterial)	A-C
Avenue (Major Arterial)	B-D
Main Street (Minor Arterial)	D-F
Urban Street (Minor Arterial)	D-F
Street (Local)	C-D
Drive (Local)	B-D

The Caltrans *Guide for the Preparation of Traffic Impact Studies* dated December 2002 (Caltrans Guide) states the following: "Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" (see Appendix "C-3") on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained."

Based on the language contained in the Tehachapi General Plan, the Caltrans Guide, and direction from City staff, a significant traffic impact will be recognized if the Project will decrease the LOS below the target LOS C. If an intersection operates below the target LOS in the existing condition, a significant traffic impact will be recognized if the Project causes the intersection delay to increase by more than 5.0 seconds per vehicle.

When a roadway or intersection is identified as operating below the City/Caltrans level of service (LOS) standard or traffic control changes are warranted, improvements are recommended based on the Circulation Element, Capital Improvement Plan (CIP), and Transportation Impact Fee (TIF) Program. Where no identified improvements exist, new recommendations are developed based on the projected traffic patterns.

Impacts and Mitigation Measures

Impact 3.17-1: *Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? OR*

Impact 3.17-2: *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

Less Than Significant With Mitigation. The information and analysis presented in this section are based on the Traffic Impact Study prepared for the Project which is included as Appendix E and is summarized herein.

Project Information

Project Trip Generation

Vehicle trips generated by the Project were calculated using the industry-standard *Trip Generation Manual* (10th Edition) published by the Institute of Transportation Engineers (ITE). Table 3.17-2 shows the daily, AM, and PM peak hour trip generation profile for the Project trips.

**Table 3.17-2
Project Trip Generation**

Housing Type and ITE Land Use	Units	A.M. Peak Hour Traffic Volumes			P.M. Peak Hour Traffic Volumes			Weekday Traffic Volume	
		Rate Split	Enter	Exit	Rate Split	Enter	Exit	Rate	Total
SFD-5 - Single-Family Detached Housing (210)	124	0.74 25/75	23	69	0.99 63/37	78	46	9.44	1,171
SFD-7 - Single-Family Detached Housing (210)	139	0.74 25/75	26	77	0.99 63/37	87	51	9.44	1,313
Patio Homes - Multifamily Housing (220)	165	0.46 23/77	18	58	0.56 63/37	59	34	7.32	1,208
Court Homes - Multifamily Housing (220)	114	0.46 23/77	12	41	0.56 63/37	40	24	7.32	835
Cottages - Multifamily Housing (220)	138	0.46 23/77	15	49	0.56 63/37	49	29	7.32	1,011
Townhomes - Multifamily Housing (220)	116	0.46 23/77	13	41	0.56 63/37	41	24	7.32	850
Apartments - Multifamily Housing (220)	204	0.46 23/77	22	72	0.56 63/37	72	43	7.32	1,494
Youth Sports Park - Public Park - (411)	3.4 acres	0.02 59/41	1	0	FC 1 55/45	13	10	FC 2	92
TOTALS:	1,000	-	130	407	-	439	261	-	7,974

Reference: *Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, September 2017.*

Rates are reported in trips per dwelling unit unless otherwise noted.

Splits are reported as Entering/Exiting as a percentage of the total.

Fitted Curve Equation FC 1: $T = 0.06(X) + 22.60$

Fitted Curve Equation FC 2: $T = 0.64(X) + 88.46$

Table 3.17-2 shows the total trips, which represents the calculated number of Project trips per the ITE Trip Generation Manual.

Project Trip Distribution

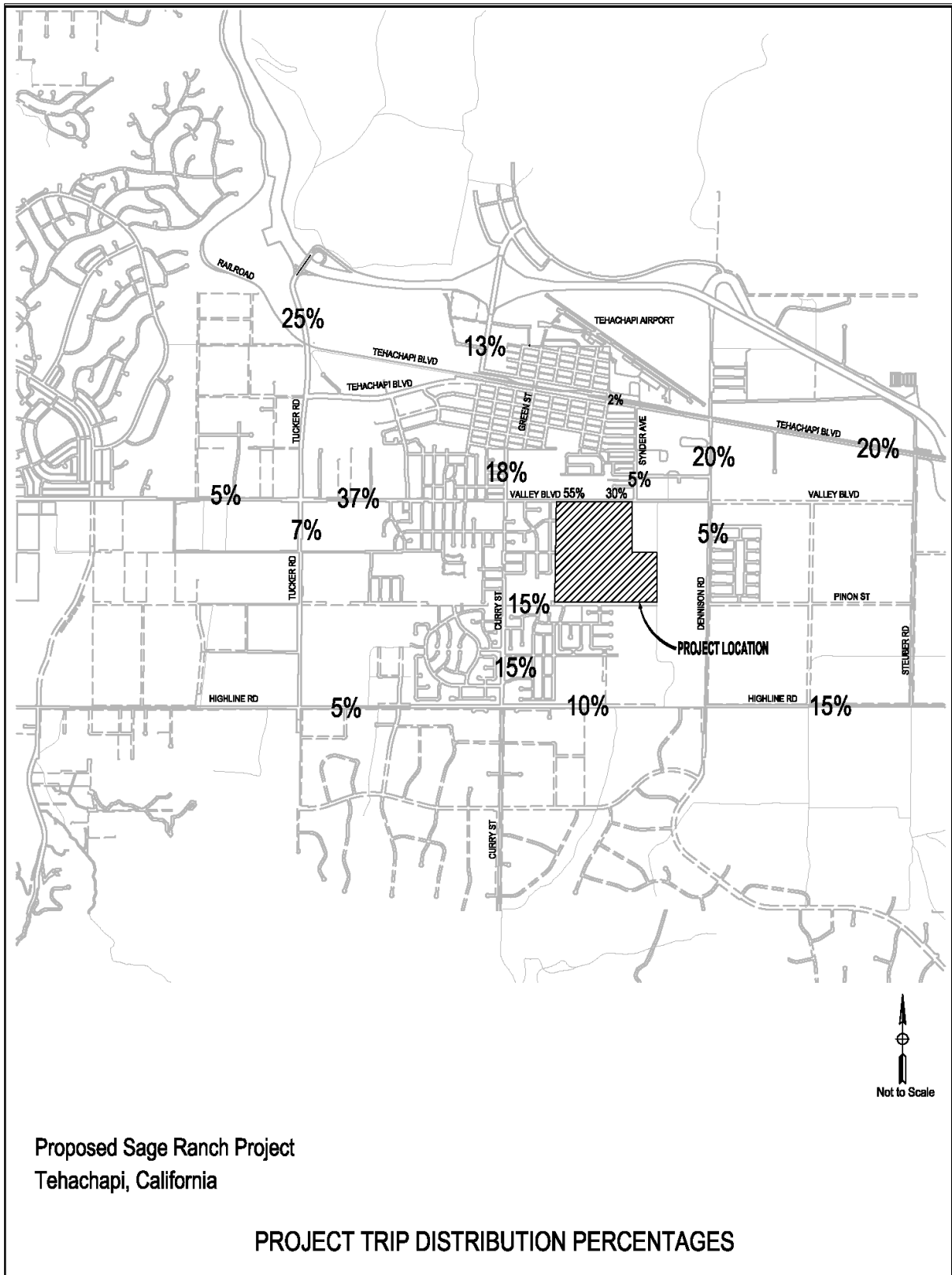
The regional distribution of Project trips were estimated by performing a select zone analysis using available travel models. The trip generation information and other relevant Project data were provided to the Kern Council of Governments (KernCOG) to perform a select zone analysis. The select zone analysis was performed using the year 2040 Kern County travel model. The select zone analysis request submitted to KernCOG and the results of the select zone analysis performed by KernCOG are attached. The regional percentage distribution of Project traffic is presented in Figure 3.17-1, Project Trip Distribution Percentages.

The peak-hour Project traffic volumes presented in Table 3.17-2 were assigned to the adjacent road network in accordance with the trip distribution percentages in Figure 3.17-1.

Project Access

The Project will have 12 points of ingress and egress, with five streets connecting to Valley Boulevard along the northern edge of the Project (four local-road-type streets and one avenue-type street). There are three local-road-type streets proposed along the western edge of the Project; two of which extend the existing Brentwood Drive and White Oak Drive into the Project while a third street would connect to future development in adjacent parcel 417-020-07. Finally, the Project proposes four street connections to Pinon Street along the southern edge of the Project (three local-road-type streets and one avenue-type street). See Figure 2-3, Proposed Site Layout Plan in Chapter Two – Project Description.

Figure 3.17-1
Project Trip Distribution Percentages



Project Impacts

As previously described, Project-generated peak hour trips are analyzed for the following conditions:

- Existing Conditions;
- Existing-Plus-Project Conditions;
- Near-Term With-Project Conditions (includes pending and approved projects)
- Cumulative Year 2040 No-Project Conditions; and
- Cumulative Year 2040 With-Project Conditions.

Existing Conditions

The Project study area includes 14 intersections. The study intersections are illustrated in Figure 3.17-2, Study Intersections. The existing lane configurations and intersection control at the study locations are presented in Figure 3.17-3, Existing Lane Configuration and Intersection Control. For purposes of this study it is assumed that the existing lane configurations and intersection control will remain through the year 2040.

Table 3.17-3 shows intersection operations under existing conditions. As shown in the table, most of the study intersections are currently operating under satisfactory conditions with the exception of the following:

- Valley Boulevard / Dennison Avenue (A.M. Peak Hour: LOS -D)
- Highline Road / Curry Street (A.M. Peak Hour: LOS-D)
- Highline Road / Dennison Avenue (A.M. Peak Hour: LOS-D)

Figure 3.17-2
Project Study Intersections

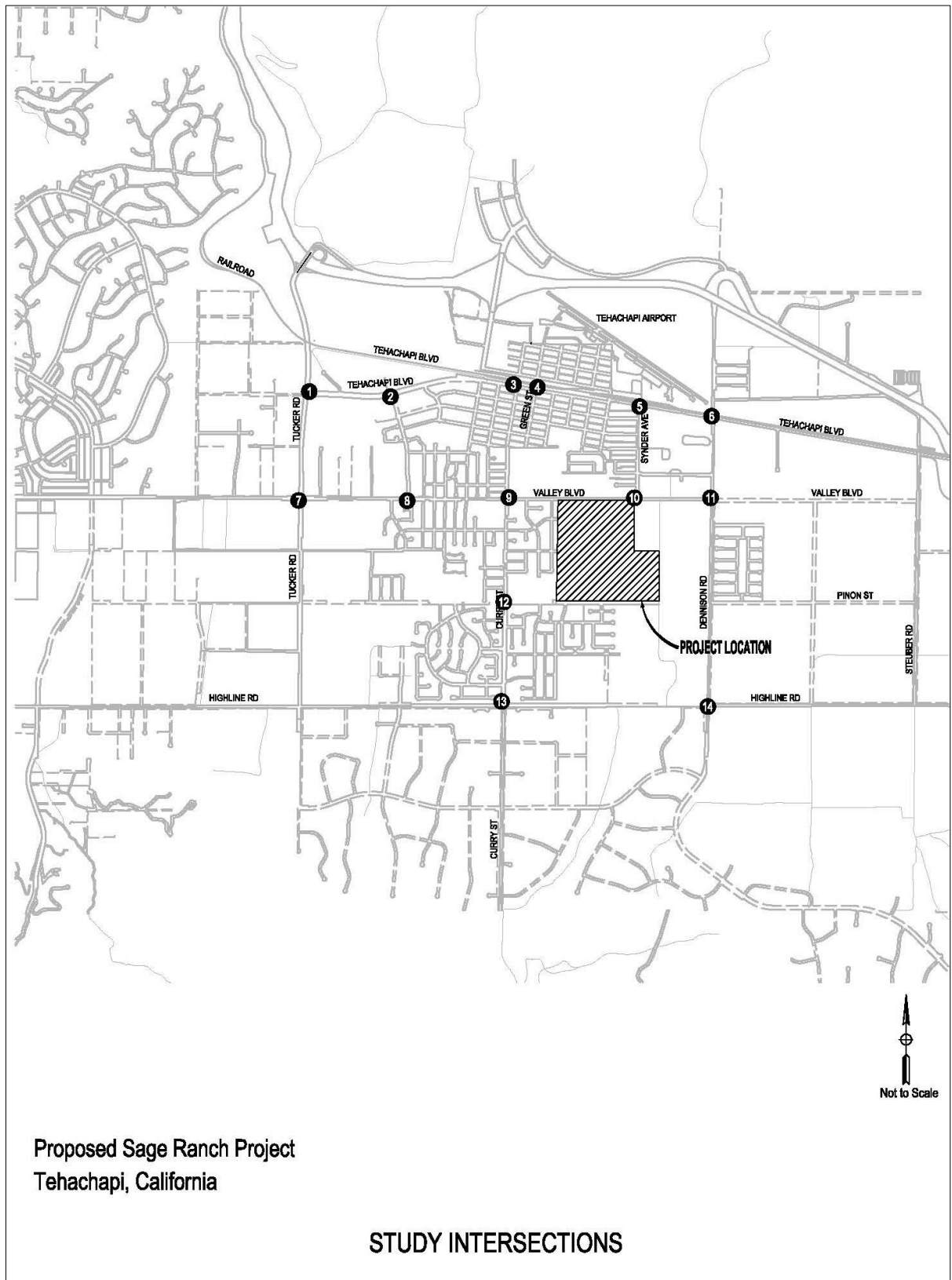


Figure 3.17-3
Existing Lane Configuration and Intersection Control

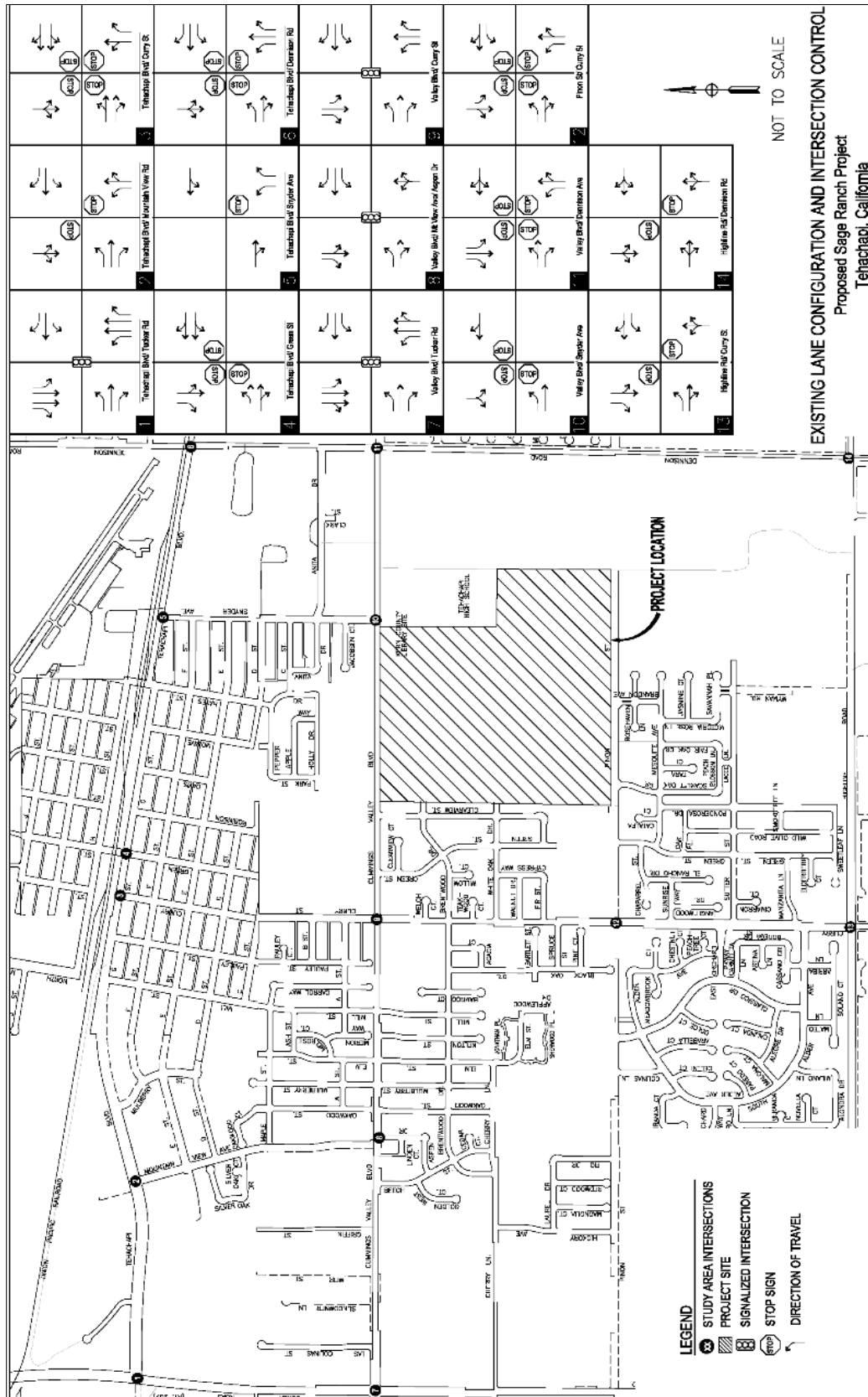


Table 3.17-3
Intersection Analysis Summary – Existing Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Tehachapi Blvd / Tucker Rd	Signals	18.5	B	24.2	C
Tehachapi Blvd / Mt. View Ave	One-way stop	16.2	C	21.5	C
Tehachapi Blvd / Curry St	All-way stop	10.1	B	11.5	B
Tehachapi Blvd / Green St	All-way stop	10.8	B	11.9	B
Tehachapi Blvd / Snyder Ave	One-way stop	19.1	C	11.4	B
Tehachapi Blvd / Dennison Rd	All-way stop	12.5	B	9.3	A
Valley Blvd / Tucker Rd	Signals	24.0	C	30.6	C
Valley Blvd / Mt. View Ave	Signals	9.9	A	11.0	B
Valley Blvd / Curry St	Signals	17.0	B	17.6	B
Valley Blvd / Snyder Ave	All-way stop	23.0	C	8.6	A
Valley Blvd / Dennison Rd	All-way stop	<u>33.0</u>	<u>D</u>	8.4	A
Pinon St / Curry St	All-way stop	10.7	B	8.6	A
Highline Rd / Curry St	Two-way stop	<u>26.7</u>	<u>D</u>	13.0	B
Highline Rd / Dennison Rd	Two-way stop	<u>30.4</u>	<u>D</u>	12.0	B

Table 3.17-4 shows queuing analysis under existing conditions. As shown in the table, all of the study intersections are currently operating under satisfactory conditions.

Table 3.17-4
Queuing Analysis Summary – Existing Conditions

Intersection	Condition	95 th -Percentile Queue (feet)											
		Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
Tehachapi Blvd / Tucker Rd	Storage Length	155	*	135	165+	*	220	160+	*	70	195+	*	60
	A.M. Peak	<u>178</u>	210	10	75	106	0	79	143	8	52	87	13
	P.M. Peak	150	190	58	275	244	0	221	130	44	141	220	<u>203</u>
Valley Blvd / Tucker Rd	Storage Length	160+	*	380	340	*	380	140+	*	S	270+	*	S
	A.M. Peak	234	149	0	90	244	5	127	96		146	58	
	P.M. Peak	328	307	46	196	369	0	338	99		274	224	
Valley Blvd / Mt. View Ave	Storage Length	110	*	S	85	*	85	S	490	S	85	DNE	*
	A.M. Peak	32	145		10	145	0		0		13		0
	P.M. Peak	64	195		13	179	0		12		23		28
Valley Blvd / Curry St	Storage Length	110	*	40	100	*	100	60	*	60	125	*	55
	A.M. Peak	58	164	0	66	130	0	<u>66</u>	54	12	21	25	0
	P.M. Peak	108	93	3	47	91	0	<u>99</u>	69	0	20	107	19

All distances in feet

+ Connects to a two-way left-turn lane that provides additional storage.

* Greater than 1,000 feet to the next major intersection.

S – Shared DNE – Does not exist

Existing Deficiencies

The analyses indicate that the following intersections are operating worse than the target LOS C:

- Valley Boulevard / Dennison Road (operates at LOS D during the a.m. peak hour)
- Highline Road / Curry Street (operates at LOS D during the a.m. peak hour)
- Highline Road / Dennison Road (operates at LOS D during the a.m. peak hour)

It is noted that the intersections listed above exhibit very low peak hour factors, likely as a result of the influence of school trips. The traffic counts indicate a very high peak that occurs during the 15-minute period from 7:15 a.m. to 7:30 a.m. The analyses contain the peak hour factor; therefore, the analysis results indicating LOS D pertain only to the peak 15-minute period and are not indicative of traffic conditions during more than 23 hours of the day.

The analyses indicate that calculated 95th-percentile queues at signalized intersections exceed the storage capacity at the following locations:

- Tehachapi Boulevard / Tucker Road: the left-turn lane on the eastbound approach during the a.m. peak hour and the right-turn lane on the southbound approach during the p.m. peak hour. The queues are unlikely to substantially affect traffic signal operations because the left-turn queue is within the length of the bay taper and there is additional space for vehicles to pass; the right-turn queue operates on the same phase as the through movement and there is a substantial amount of space for queues to form beyond the striped lane.
- Valley Boulevard / Curry Street: the left-turn lane on the northbound approach during the a.m. and p.m. peak hour. The calculated queue exceeds the distance between the limit line and the “Keep Clear” area in front of the fire station, although the roadway south of the “Keep Clear” area is wide enough to accommodate the remainder of the queue. Therefore, it is unlikely that the calculated queues would substantially affect traffic signal operations.

Existing Plus Project Conditions

This scenario is required under CEQA and assumes the entire Project is added to existing conditions. It does not take into account Project phasing or potential roadway improvement projects that may occur in the future. It is intended to illustrate raw Project impacts. However, mitigation is determined assuming a phased buildout in the context of cumulative conditions.

Existing Plus Project Intersection LOS Analysis

The results of the existing-plus-Project conditions intersection LOS analyses are summarized in Table 3.17-5. The intersection analysis sheets are presented in Appendix B of Appendix F. Project significant impacts are identified in bold type. Intersections operating below the target LOS but not significantly impacted by the Project are indicated in italic type.

Table 3.17-5
Intersection Analysis Summary – Existing Plus Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Tehachapi Blvd / Tucker Rd	Signals	19.2	B	25.4	C
Tehachapi Blvd / Mt. View Ave	One-way stop	16.2	C	21.5	C
Tehachapi Blvd / Curry St	All-way stop	10.7	B	13.4	B
Tehachapi Blvd / Green St	All-way stop	12.1	B	13.6	B
Tehachapi Blvd / Snyder Ave	One-way stop	19.9	C	11.5	B
Tehachapi Blvd / Dennison Rd	All-way stop	13.7	B	10.1	B
Valley Blvd / Tucker Rd	Signals	26.4	C	32.1	C
Valley Blvd / Mt. View Ave	Signals	10.3	B	11.6	B
Valley Blvd / Curry St	Signals	18.5	B	19.7	B
Valley Blvd / Snyder Ave	All-way stop	<u>72.4</u>	<u>F</u>	10.9	B
Valley Blvd / Dennison Rd	All-way stop	<u>54.3</u>	<u>F</u>	9.6	A
Pinon St / Curry St	All-way stop	11.7	B	9.0	A
Highline Rd / Curry St	Two-way stop	<u>45.8</u>	<u>E</u>	14.7	B
Highline Rd / Dennison Rd	Two-way stop	<u>66.8</u>	<u>F</u>	13.4	B

Existing Plus Project Queuing Analysis

The results of the existing-plus-Project conditions queuing analyses are summarized in Table 3.17-6. Calculated 95th-percentile queues exceeding the storage capacity are identified in bold type.

Table 3.17-6
Queuing Analysis Summary – Existing Plus Project Conditions

Intersection	Condition	95 th -Percentile Queue (feet)											
		Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
Tehachapi Blvd / Tucker Rd	Storage Length	155	*	135	165+	*	220	160+	*	70	195+	*	60
	A.M. Peak	<u>194</u>	228	10	81	115	0	85	190	6	55	103	12
	P.M. Peak	<u>156</u>	197	60	285	251	0	229	163	51	146	286	<u>227</u>
Valley Blvd / Tucker Rd	Storage Length	160+	*	380	340	*	380	140+	*	S	270+	*	S
	A.M. Peak	252	160	0	134	278	28	136	104		193	60	
	P.M. Peak	328	335	46	225	389	57	338	101		531	224	
Valley Blvd / Mt. View Ave	Storage Length	110	*	S	85	*	85	S	490	S	85	DNE	*
	A.M. Peak	32	172		10	249	0		0		13		0
	P.M. Peak	64	363		13	276	0		12		23		28
Valley Blvd / Curry St	Storage Length	110	*	40	100	*	100	60	*	60	125	*	55
	A.M. Peak	58	198	0	66	264	14	<u>66</u>	54	12	41	25	0
	P.M. Peak	108	202	3	47	154	0	<u>99</u>	69	0	117	107	19

All distances in feet

+ Connects to a two-way left-turn lane that provides additional storage.

* Greater than 1,000 feet to the next major intersection.

S – Shared DNE – Does not exist

The Project is likely to cause significant traffic impacts at the following locations:

- Valley Boulevard / Snyder Avenue: the Project will cause the LOS to drop from C to F during the a.m. peak hour.
- Valley Boulevard / Dennison Road: the Project will cause the LOS to drop from D to F during the a.m. peak hour.
- Highline Road / Curry Street: the Project will cause the LOS to drop from D to E during the a.m. peak hour.
- Highline Road / Dennison Road: the Project will cause the LOS to drop from D to F during the a.m. peak hour.

The queueing conditions at signalized intersections are expected to be similar to the existing conditions.

Existing Plus Project Mitigation Measures: See Table 3.17-11 for a summary of traffic/transportation mitigation measures.

Near-Term With Project Conditions

The analyses for the near-term with-Project conditions consider the effects of traffic expected to be generated by pending projects in the study area. Table 7.1 of Appendix F presents a summary of the pending projects that were included in the analysis. Table 7.2 of Appendix F presents a summary of the trip generation estimates for the pending projects expected to impact the study intersections.

Near Term With Project Intersection LOS Analysis

The results of the existing-plus-Project conditions intersection LOS analyses are summarized in Table 3.17-7. The intersection analysis sheets are presented in Appendix B of Appendix F. Project significant impacts are identified in bold type. Intersections operating below the target LOS but not significantly impacted by the Project are indicated in italic type.

Table 3.17-7
Intersection Analysis Summary – Near Term With Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Tehachapi Blvd / Tucker Rd	Signals	23.4	C	34.8	C
Tehachapi Blvd / Mt. View Ave	One-way stop	24.9	C	<u>45.2</u>	<u>E</u>
Tehachapi Blvd / Curry St	All-way stop	14.6	B	<u>31.4</u>	<u>D</u>
Tehachapi Blvd / Green St	All-way stop	<u>26.7</u>	<u>D</u>	<u>36.6</u>	<u>E</u>
Tehachapi Blvd / Snyder Ave	One-way stop	<u>31.5</u>	<u>D</u>	13.8	B
Tehachapi Blvd / Dennison Rd	All-way stop	18.2	C	11.6	B
Valley Blvd / Tucker Rd	Signals	28.0	C	32.2	C
Valley Blvd / Mt. View Ave	Signals	15.3	B	19.6	B
Valley Blvd / Curry St	Signals	30.6	C	30.6	C
Valley Blvd / Snyder Ave	All-way stop	<u>139.2</u>	<u>F</u>	15.0	B
Valley Blvd / Dennison Rd	All-way stop	<u>72.8</u>	<u>F</u>	11.1	B
Pinon St / Curry St	All-way stop	18.7	C	10.8	B
Highline Rd / Curry St	Two-way stop	<u>>300</u>	<u>F</u>	<u>32.6</u>	<u>D</u>
Highline Rd / Dennison Rd	Two-way stop	<u>90.2</u>	<u>F</u>	13.8	B

Near Term With Project Queuing Analysis

The results of the near term-with-Project conditions queuing analyses are summarized in Table 3.17-8. Calculated 95th-percentile queues exceeding the storage capacity are identified in bold type.

Table 3.17-8
Queuing Analysis Summary – Near Term With Project Conditions

Intersection	Condition	95th-Percentile Queue (feet)											
		Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
Tehachapi Blvd / Tucker Rd	Storage Length	155	*	135	165+	*	220	160+	*	70	195+	*	60
	A.M. Peak	142	362	32	171	173	0	176	298	54	83	165	30
	P.M. Peak	69	266	61	302	261	0	285	171	51	114	313	142
Valley Blvd / Tucker Rd	Storage Length	160+	*	380	340	*	380	140+	*	S	270+	*	**
	A.M. Peak	184	205	0	139	301	21	159	155		139	83	22
	P.M. Peak	217	340	48	204	371	65	301	138		255	183	228
Valley Blvd / Mt. View Ave	Storage Length	110	*	S	85	*	85	S	490	S	85	DNE	*
	A.M. Peak	34	309		10	424	0		0		13		0
	P.M. Peak	66	572		13	488	0		12		27		30
Valley Blvd / Curry St	Storage Length	110	*	40	100	*	100	60	*	60	125	*	55
	A.M. Peak	88	302	0	67	382	17	134	93	13	42	41	0
	P.M. Peak	154	401	17	53	329	0	159	92	0	139	165	13

All distances in feet

+ Connects to a two-way left-turn lane that provides additional storage.

* Greater than 1,000 feet to the next major intersection.

** New lane per recommendations of Red Apple Pavilion Traffic Impact Analysis Report

S – Shared DNE – Does not exist

The combination of the pending and approved projects and the Project is likely to cause significant cumulative traffic impacts at the following locations:

- Tehachapi Boulevard / Mountain View Avenue: the cumulative projects will cause the LOS to drop from C to D during the a.m. peak hour and from C to E during the p.m. peak hour. The Project is expected to generate a negligible number of trips at this intersection. Therefore, a significant impact will not be identified as the Project does not contribute to the impact.

- Tehachapi Boulevard / Curry Street: the cumulative projects will cause the LOS to drop from B to D during the p.m. peak hour.
- Tehachapi Boulevard / Green Street: the cumulative projects will cause the LOS to drop from B to D during the a.m. peak hour and from B to E during the p.m. peak hour.
- Tehachapi Boulevard / Snyder Road: the cumulative projects will cause the LOS to drop from C to D during the a.m. peak hour.
- Valley Boulevard / Snyder Road: the cumulative projects will cause the LOS to drop from C to F during the a.m. peak hour.
- Valley Boulevard / Dennison Road: the cumulative projects will cause the LOS to drop from D to F during the a.m. peak hour.
- Highline Road / Curry Street: the cumulative projects will cause the LOS to drop from D to F during the a.m. peak hour and from B to D during the p.m. peak hour.
- Highline Road / Dennison Road: the cumulative projects will cause the LOS to drop from D to F during the a.m. peak hour.

The queueing conditions at signalized intersections in the near-term with-Project scenario are expected to be similar to the existing conditions. At the intersection of Valley Boulevard and Curry Street, the calculated 95th-percentile queues in the left-turn lanes on the eastbound and northbound approaches are long enough to potentially block the through movements. Since the width of the roadways on these approaches is limited, adjustment of traffic signal timing based on field observations would be recommended as a first option. If necessary, modification of the traffic signal phasing, with consideration given to protected-permissive phasing, may be required.

Near-Term With-Project Peak-Hour Warrants

Peak hour traffic signal warrants were plotted for the seven significantly impacted intersections listed above. The traffic signal warrants output is presented in Appendix C of Appendix E. Peak-hour traffic signal warrants are satisfied at the following intersections:

- Tehachapi Boulevard / Curry Street
- Tehachapi Boulevard / Green Street
- Valley Boulevard / Snyder Road
- Valley Boulevard / Dennison Road
- Highline Road / Curry Street.

Near Term Mitigation Measures: See Table 3.17-11 for a summary of traffic/transportation mitigation measures.

Cumulative (Year 2040) With Project Conditions

The analyses for the cumulative (Year 2040) with-Project conditions consider the effects of traffic expected to be generated by full buildout of the Project with pending projects in the study area as well as projected development through the Year 2040. Table 7.1 of Appendix F presents a summary of the pending projects that were included in the analysis. Table 7.2 of Appendix F presents a summary of the trip generation estimates for the cumulative conditions that are expected to impact the study intersections.

The cumulative year 2040 analyses not only include trips expected to be generated by the pending projects, but also incorporate recommended year 2040 mitigation measures obtained from the Traffic Impact Analysis Report for the Red Apple Pavilion dated March 28, 2017. The additional improvements assumed in the analyses include the following:

- Tehachapi Boulevard / Tucker Road: a second eastbound left-turn lane, a second westbound left-turn lane, a southbound right-turn overlap phase while preventing U turns from the eastbound approach, and a northbound right-turn overlap phase while preventing U turns from the westbound approach.
- Valley Boulevard / Tucker Road: a second left-turn lane on the eastbound, westbound and southbound approaches, a dedicated right-turn lane on the southbound approach, a southbound right-turn overlap phase while preventing U turns from the eastbound approach, and a westbound right-turn overlap phase while preventing U turns from the southbound approach.
- Tehachapi Boulevard / Mountain View Avenue: re-stripe to a two-way left-turn lane on Tehachapi Boulevard to accept left turns from the northbound movement. It should be noted that the Red Apple Pavilion traffic impact analysis report also included a recommendation to allow left turns from two different northbound lanes; this recommendation was not incorporated because there is only one westbound receiving lane, and it is not typical to allow dual lefts in a stop-controlled intersection.
- Tehachapi Boulevard / Green Street: install a traffic signal with two-phase operations.

The year 2040 lane configurations and intersection control are presented in Figure 8.1 of Appendix F, Cumulative (Year 2040) No-Project Lane Configurations and Intersection Control.

Cumulative (Year 2040) Existing Deficiencies Without the Project

The following intersections are expected to operate worse than the target LOS without the Project:

- Tehachapi Boulevard / Mountain View Avenue: LOS D during the a.m. peak hour and LOS F during the p.m. peak hour.
- Tehachapi Boulevard / Snyder Avenue: LOS E during the a.m. peak hour.
- Valley Boulevard / Tucker Road: LOS D during the p.m. peak hour.
- Valley Boulevard / Snyder Avenue: LOS F during the a.m. peak hour.
- Valley Boulevard / Dennison Road: LOS F during the a.m. peak hour.
- Highline Road / Curry Street: LOS F during the a.m. peak hour and LOS D during the p.m. peak hour.
- Highline Road / Dennison Road: LOS E during the a.m. peak hour.

The design of the planned traffic signals at the intersection of Tehachapi Boulevard and Green Street should consider the possible need for a pre-signal given the distance between Tehachapi Boulevard and the at-grade rail crossing.

The analyses indicate that calculated 95th-percentile queues at signalized intersections exceed the existing storage capacity at the locations described below. It should be noted that improvements that are expected to be constructed at the intersections prior to 2040 should be designed to accommodate the anticipated year 2040 queues.

- Tehachapi Boulevard / Tucker Road: the left-turn lanes on the eastbound approach during the a.m. peak hour and the right-turn lane on the southbound approach during the p.m. peak hour. The queues are unlikely to substantially affect traffic signal operations because the left-turn queue is within the length of the bay taper and there is additional space for vehicles to pass; the right-turn queue operates on the same phase as the through movement.
- Valley Boulevard / Curry Street: the left-turn lanes on the eastbound, westbound, and northbound approaches. At the intersection of Valley Boulevard and Curry Street, the calculated 95th-percentile queues in the left-turn lanes on the eastbound and northbound approaches are long enough to potentially block the through movements. Since the width of the roadways on these approaches is limited, adjustment of traffic signal timing based

on field observations would be recommended as a first option. If necessary, modification of the traffic signal phasing, with consideration given to protected-permissive phasing, may be required.

Cumulative (Year 2040) Intersection LOS Analysis

The results of the Cumulative (Year 2040) conditions intersection LOS analyses are summarized in Table 3.17-9. The intersection analysis sheets are presented in Appendix B of Appendix E. Project significant impacts are identified in bold type. Intersections operating below the target LOS but not significantly impacted by the Project are indicated in italic type.

**Table 3.17-9
Intersection Analysis Summary – Cumulative (Year 2040) Conditions**

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Tehachapi Blvd / Tucker Rd	Signals	23.8	C	34.3	C
Tehachapi Blvd / Mt. View Ave	One-way stop	<u>27.6</u>	<u>D</u>	<u>61.6</u>	<u>F</u>
Tehachapi Blvd / Curry St	All-way stop	14.8	B	<u>32.2</u>	<u>D</u>
Tehachapi Blvd / Green St	Signals	7.4	A	15.3	B
Tehachapi Blvd / Snyder Ave	One-way stop	<u>41.1</u>	<u>E</u>	14.4	B
Tehachapi Blvd / Dennison Rd	All-way stop	19.5	C	12.7	B
Valley Blvd / Tucker Rd	Signals	22.0	C	<u>41.9</u>	<u>D</u>
Valley Blvd / Mt. View Ave	Signals	12.7	B	24.7	C
Valley Blvd / Curry St	Signals	28.0	C	33.5	C
Valley Blvd / Snyder Ave	All-way stop	<u>140.0</u>	<u>F</u>	13.0	B
Valley Blvd / Dennison Rd	All-way stop	<u>94.1</u>	<u>F</u>	11.6	B
Pinon St / Curry St	All-way stop	19.5	C	12.4	B
Highline Rd / Curry St	Two-way stop	<u>>300</u>	<u>F</u>	<u>48.7</u>	<u>E</u>
Highline Rd / Dennison Rd	Two-way stop	<u>129.8</u>	<u>F</u>	18.2	C

Cumulative (Year 2040) Queuing Analysis

The results of the near term-with-Project conditions queuing analyses are summarized in Table 3.17-10. Calculated 95th-percentile queues exceeding the storage capacity are identified in bold type.

Table 3.17-10
Queuing Analysis Summary – Cumulative (Year 2040) Conditions

Intersection	Condition	95th-Percentile Queue (feet)											
		Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
Tehachapi Blvd / Tucker Rd	Storage Length	155	*	135	165+	*	220	160+	*	70	195+	*	60
	A.M. Peak	171	375	39	81	171	0	163	301	46	89	171	43
	P.M. Peak	99	269	66	208	359	1	338	214	52	189	402	277
Tehachapi Blvd / Green Rd	Storage Length	S	*	S	S	*	S	DNE	DNE	DNE	S	85++	85++
	A.M. Peak		144			40						56	35
	P.M. Peak		137			68						80	76
Valley Blvd / Tucker Rd	Storage Length	160+	*	380	340	*	380	140+	*	S	270+	*	**
	A.M. Peak	147	245	0	131	157	79	152	115		109	68	41
	P.M. Peak	193	485	53	304	207	74	440	109		231	174	258
Valley Blvd / Mt. View Ave	Storage Length	110	*	S	85	*	85	S	490	S	85	DNE	*
	A.M. Peak	44	322		12	436	0		0		18		0
	P.M. Peak	105	572		14	488	0		13		30		37
Valley Blvd / Curry St	Storage Length	110	*	40	100	*	100	60	*	60	125	*	55
	A.M. Peak	118	323	9	123	338	37	142	124	31	56	55	0
	P.M. Peak	194	401	17	84	329	0	159	97	0	139	168	30

All distances in feet

+ Connects to a two-way left-turn lane that provides additional storage.

* Greater than 1,000 feet to the next major intersection.

** New lane per recommendations of Red Apple Pavilion Traffic Impact Analysis Report

++ Storage distance between at-grade rail crossing and limit line. Additional storage exists north of the crossing.

S – Shared DNE – Does not exist

The combination of the pending and approved projects, regional growth, and the Project is likely to cause significant cumulative traffic impacts at the following locations:

- Tehachapi Boulevard / Mountain View Avenue: the cumulative projects will cause the LOS to drop from C to D during the a.m. peak hour and from C to F during the p.m. peak hour. The Project is expected to generate a negligible number of trips at this intersection.

Therefore, a significant impact will not be identified as the Project does not contribute to the impact.

- Tehachapi Boulevard / Curry Street: the cumulative projects will cause the LOS to drop from B to D during the p.m. peak hour.
- Tehachapi Boulevard / Snyder Avenue: the cumulative projects will cause the LOS to drop from C to E during the a.m. peak hour.
- Valley Boulevard / Tucker Road: the cumulative projects will cause the LOS to drop from C to D during the p.m. peak hour.
- Valley Boulevard / Snyder Avenue: the cumulative projects will cause the LOS to drop from C to F during the a.m. peak hour.
- Valley Boulevard / Dennison Road: the cumulative projects will cause the LOS to drop from D to F during the a.m. peak hour.
- Highline Road / Curry Street: the cumulative projects will cause the LOS to drop from D to F during the a.m. peak hour and from B to E during the p.m. peak hour.
- Highline Road / Dennison Road: the cumulative projects will cause the LOS to drop from D to F during the a.m. peak hour.

The design of the planned traffic signals at the intersection of Tehachapi Boulevard and Green Street should consider the possible need for a pre-signal given the distance between Tehachapi Boulevard and the at-grade rail crossing.

The queueing conditions at signalized intersections in the year 2040 with-Project scenario are expected to be similar to the 2040 no-Project conditions. The analyses indicate that calculated 95th-percentile queues at signalized intersections exceed the existing storage capacity at the locations described below. It should be noted that improvements that are expected to be constructed at the intersections prior to 2040 should be designed to accommodate the anticipated year 2040 queues.

- Tehachapi Boulevard / Tucker Road: the left-turn lanes on the eastbound approach during the a.m. peak hour and the right-turn lane on the southbound approach during the p.m. peak hour. The queues are unlikely to substantially affect traffic signal operations because the left-turn queue is within the length of the bay taper and there is additional space for vehicles to pass; the right-turn queue operates on the same phase as the through movement.
- Valley Boulevard / Curry Street: the left-turn lanes on the eastbound, westbound, and northbound approaches. The calculated 95th-percentile queues in the left-turn lanes on the eastbound and northbound approaches are long enough to potentially block the

through movements. Since the width of the roadways on these approaches is limited, adjustment of traffic signal timing based on field observations would be recommended as a first option. If necessary, modification of the traffic signal phasing, with consideration given to protected-permissive phasing, may be required.

Cumulative (Year 2040) With-Project Peak-Hour Warrants

Peak hour traffic signal warrants were plotted for the six unsignalized, significantly impacted intersections listed above. The traffic signal warrants output is presented in Appendix C of Appendix F. Peak-hour traffic signal warrants are satisfied at the following intersections:

- Tehachapi Boulevard / Curry Street
- Tehachapi Boulevard / Snyder Avenue
- Valley Boulevard / Snyder Road
- Valley Boulevard / Dennison Road
- Highline Road / Curry Street.

Cumulative (Year 2040) Mitigation Measures: See Table 3.17-11 for a summary of traffic/transportation mitigation measures.

Project Requirements and Mitigation

Existing Tehachapi Region Transportation Impact Fee Program

The table below presents facilities adjacent to study locations that are included in the Tehachapi Region Transportation Impact Fee (TIF) Program.

Tehachapi Region Transportation Impact Fee Program Facilities

TIF Project Number	Location	Improvement	Estimated Cost	Percent TIF Funded
11	Highline Rd / Curry St	Signals	\$140,000	100
12	Highline Rd / Dennison St	Signals	\$140,000	100
17	Tehachapi Blvd - Tucker to Mulberry	Add two lanes	\$580,000	95
18	Tehachapi Blvd / Mt. View Ave	Signals	\$140,000	91
21	Tehachapi Blvd / Green St	Signals	\$140,000	100
22	Tehachapi Blvd / Curry St	Signals	\$140,000	100
25	Tehachapi Blvd / Snyder Ave	Signals	\$140,000	100
26	Tehachapi Blvd / Dennison Rd	Signals	\$140,000	100
28	Tehachapi Blvd - Dennison to Tehachapi-Willow Springs	Add two lanes	\$2,050,000	100
50	Valley Blvd - Tucker to Dennison	Add two lanes	\$1,930,000	100
51	Valley Blvd / Mt. View Ave	Signals	\$140,000	100
53	Valley Blvd / Curry St	Upgrade signals	\$140,000	100
54	Valley Blvd / Snyder Ave	Signals	\$140,000	100
55	Valley Blvd / Dennison Rd	Signals	\$140,000	100

The Project will be required to construct public road frontage as well as all on-site roadways. Table 3.17-11 presents the study intersections at which the Project will either cause or contribute to a significant impact and presents a summary of the mitigation measures recommended for each analysis scenario. Recommended mitigation for off-site improvements is shown in Table 3.17-11 and is included in Mitigation Measures TRA-1 and TRA-2.

Table 3.17-11
Summary of Recommended Mitigation Measures*

Location	Scenario		
	Existing Plus Project	Near-Term With-Project	2040 With-Project
Tehachapi Blvd / Curry St		NT-1: Signals	2040-1: Same as NT-1
Tehachapi Blvd / Green St		NT-2: Signals	2040: Same as NT-2
Tehachapi Blvd / Snyder Ave		NT-3: All-way stop and stripe right-turn lane (on EB approach for vehicles travelling east then turning south)	2040-2: Signals and stripe right-turn lane
Valley Blvd / Tucker Rd		Second left turn-lane and dedicated right turn lane on SB approach; second left-turn lane on eastbound approach; SB right-turn overlap phase**	2040-3: Widening
Valley Blvd / Snyder Ave	P-1: Roundabout (preferred) or signals and widening	NT-4: Same as P-1	2040-4: Roundabout (preferred) or signals and additional widening
Valley Blvd / Dennison Rd	P-2: Signals	NT-5: Same as P-2	2040-5: Same as P-2
Highline Rd / Curry St	P-3: Roundabout and Pinon Extension (preferred) or all-way stop	NT-6: Same as P-3	2040-6: Roundabout and Pinon Extension (preferred) or signals
Highline Rd / Dennison Rd	P-4: Roundabout (preferred) or all-way stop and widening	NT-7: Same as P-4	2040-7: Same as P-4

*This table presents a summary of the recommended mitigation measures. Refer to Appendix F for the specific descriptions of the mitigation measures.

**This mitigation was included as mitigation for the Red Apple Pavilion project. However, if the Red Apple Pavilion project does not move forward to development, an equitable share of this mitigation may be imposed on other projects, including the proposed Sage Ranch project.

Where required cumulative mitigation measures are not fully included in a traffic impact fee to be paid by the Project and/or the Project is not 100-percent responsible for the mitigation measures, the Project's financial responsibility for the mitigation measures can be determined based on equitable share calculations. Caltrans recommends the following equation as presented in the Caltrans *Guide for the Preparation of Traffic Impact Studies* to determine a project's equitable share of the cost of improvements to State facilities:

$$P = \frac{T}{T_B - T_E}$$

Where:

P = The equitable share of the project's traffic impact;

T = The project trips generated during the peak hour of the adjacent State Highway facility;

T_B = The forecasted (cumulative with project) traffic volume on the impacted State highway facility;

T_E = The existing traffic on the State Highway facility plus approved projects traffic.

Table 3.17-12 presents equitable share responsibility calculations for the cumulative 2040 intersection mitigation measures based on worst-case peak hour trips.

Table 3.17-12
Equitable Share Responsibility Calculations

Location	Peak Hour	Project Trips	Existing Traffic	2040 Traffic	Equitable Share (%)	Fee Program	Notes
Tehachapi Blvd / Curry St	P.M.	91	915	1,486	15.9	Yes	Funded for traffic signals
Tehachapi Blvd / Green St	P.M.	91	909	1,555	14.1	Yes	Funded for traffic signals
Tehachapi Blvd / Snyder Ave	A.M.	11	611	937	3.4	Yes	Funded for traffic signals
Valley Blvd / Tucker Rd	P.M.	259	2,106	3,699	16.3	Yes	Funded for adding two lanes east of Tucker Rd
Valley Blvd / Snyder Ave	A.M.	225	845	1,506	34.0	Yes	Funded for traffic signals and adding two lanes to Valley Blvd
Valley Blvd / Dennison Rd	A.M.	134	793	1,336	24.7	Yes	Funded for traffic signals and adding two lanes to Valley Blvd
Highline Rd / Curry St	A.M.	81	552	1,052	16.2	Yes	Funded for traffic signals
Highline Rd / Dennison Rd	A.M.	81	500	839	23.9	Yes	Funded for traffic signals

See Table 10.2 of Appendix F.

Mitigation Measures:

TRA-1 The Project will be responsible for paying the Tehachapi Region Transportation Impact Fee to contribute to transportation improvement projects in the city of Tehachapi and surrounding county areas.

TRA-2 The Project will be responsible for paying its fair share cost percentages and/or constructing the recommended improvements identified in Table 3.17-11 and Table 3.17-12, subject to reimbursement for the costs that are in excess of the Project's equitable responsibility as determined by the City. This will be itemized and enforced through conditions of approval or a development agreement, at the discretion of the City.

Conclusion: With implementation of the recommended improvements, the impacts to the effected intersections would be *less than significant*. As shown in Table 3.17-13 Mitigated Intersection Analysis Summary and Table 3.17-14 Mitigated Queuing Analysis Summary all intersections would operate at acceptable levels.

**Table 3.17-13
Mitigated Intersection Analysis Summary**

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Tehachapi Blvd / Curry St	Signals	7.5	A	8.6	A
Tehachapi Blvd / Snyder Ave	Signals	6.7	A	5.8	A
Valley Blvd / Tucker Rd	Signals	21.4	C	33.7	C
Valley Blvd / Snyder Ave	Signals	20.2	C	10.3	B
	Roundabout	6.1	A	5.0	A
Valley Blvd / Dennison Rd	Signals	27.7	C	12.2	B
Highline Rd / Curry St	Signals	28.9	C	19.1	B
	Roundabout	10.1	B	7.3	A
Highline Rd / Dennison Rd	All-way stop	15.9	C	15.0	B
	Roundabout	7.8	A	5.6	A

Table 3.17-14
Mitigated Queuing Analysis Summary

Intersection	Condition	95 th -Percentile Queue (feet)											
		Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
Tehachapi Blvd / Curry St	A.M. Peak		91			66			30	41		0	
	P.M. Peak		67			158			50	38		9	
Tehachapi Blvd / Snyder Ave	A.M. Peak		127	11		78		64		15			
	P.M. Peak		90	116		114		17		7			
Valley Blvd / Tucker Rd	A.M. Peak	142	236	0	126	150	88	77	115		105	59	63
	P.M. Peak	171	410	48	242	176	96	197	111		232	152	225
Valley Blvd / Snyder Ave (signals)	A.M. Peak	228	145		17	122			59			193	
	P.M. Peak	78	61		26	82			36			42	
Valley Blvd / Snyder Ave (roundabout)	A.M. Peak	81			135			24			156		
	P.M. Peak	21			51			7			18		
Valley Blvd / Dennison Rd	A.M. Peak		152	0		0		165	139		0	187	20
	P.M. Peak		93	18		0		71	28		0	53	35
Highline Rd / Curry St (signals)	A.M. Peak	67	229		11	107			15			138	17
	P.M. Peak	131	62		10	370			21			70	33
Highline Rd / Curry St (roundabout)	A.M. Peak	243			41			9			78		
	P.M. Peak	38			95			4			45		
Highline Rd / Dennison Rd (all-way stop)	A.M. Peak	140	95			25			5			30	
	P.M. Peak	5	25			153			3			15	
Highline Rd / Dennison Rd (roundabout)	A.M. Peak	135			27			8			24		
	P.M. Peak	24			68			2			16		

All distances in feet

Turn lanes shall be constructed to accommodate the maximum 95th-percentile queue

Impact 3.17-3: *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Impact 3.17-4: *Result in inadequate emergency access?*

Less Than Significant Impact. The overall layout of the proposed Project is block form, with shortened roadway lengths in order to create a walkable urban environment. The site has been designed with 12 points of ingress and egress. Five of these points connect at Valley Boulevard along the northern edge of the Project; 3 access points on the western edge; and 4 access points along the southern edge. The Project will be responsible for construction of internal roadways to City standards as well as for potential improvements to surrounding roadways to accommodate the Project.

No roadway design features associated with this proposed Project would result in an increase in hazards due to a design feature or be an incompatible use. The internal road system has been designed with relatively short blocks with traffic calming features. There are no non-residential uses (such as farm equipment) associated with the project. The City has reviewed the site layout and determined that the Project provides adequate emergency access. There is a *less than significant impact*.

Mitigation Measures: None are required.

3.19 Utilities

This section of the DEIR identifies potential impacts of the proposed Project pertaining to water supply and infrastructure, wastewater service, solid waste and other utility services. Two IS/NOP comment letters were received pertaining to this topic (See Appendix A). The Tehachapi-Cummings County Water District commented that a Water Supply Assessment should be prepared for the Project. An SB 610 Water Supply Assessment was prepared and is included as Appendix D. The State Water Resources Control Board commented that the City will need to demonstrate enough water source capacity to support the Project and that an amended permit may be needed from the Water Board. These two comments have been addressed in the analysis herein.

Environmental Setting

Water System and Supply

The Tehachapi Basin (Basin) provides the main source of water supply for the City of Tehachapi and surrounding communities. The Tehachapi-Cummings County Water District (TCCWD) serves as Watermaster over the Basin. Tehachapi is currently allocated 1,847 acre-feet per year (afy), approximately 90 percent of its average demand of 2,017 afy.¹ The City makes up the shortfall by acquiring water from the exchange pool, in which water rights holders are able to exchange or sell portions of their allocation. Major rights holders in addition to Tehachapi include the Golden Hills Community Services District (CSD), industrial and agricultural users, with agricultural users representing the largest number of participants in the exchange pool.²

Total groundwater storage of the Basin is estimated at 225,000 af (based on an estimated basin volume of 3,250,000 af and a specific yield of 7 percent).³ According to the TCCWD, the Basin's safe yield is 5,500 af annually.⁴

¹ Based on the City's 10-year average (communication with Public Works Department Sept. 2019).

² Tehachapi General Plan EIR, page 4.14.1-1.

³ Tehachapi Valley West Groundwater Bulletin: CA Groundwater Bulletin 118

⁴ <http://tccwd.com/ground-water-managment/>, Accessed July 2016.

The City's water service area covers approximately 4,800 acres and operates six wells serving five pressure zones.⁵ The City water service area includes a variety of residential, commercial, governmental, institutional, and industrial water users. Water is distributed via a City-maintained system of 2-inch through 16-inch mainline piping. All of the potable domestic water is currently derived from groundwater wells.

Surface Water

Surface water from the California State Water Project (SWP) is used to recharge the aquifer in the greater area. SWP water is delivered to the area through a transmission system and allocation program administered by the California Department of Water Resources (DWR). The Kern County Water Agency has a contract with the DWR and allocates 20,000 afy to the Tehachapi-Cummings County Water District (TCCWD); this allocation is used to recharge the groundwater aquifer.

Wastewater (Sewer)

The City of Tehachapi currently has approximately 2,800 sewer service connections. Thirty-five miles of sanitary sewers convey wastewater to the wastewater treatment plant (WWTP). The existing wastewater treatment plant, located between the Union Pacific Railroad right-of-way railroad and State Route 58 on the west side of the City, has a capacity of 1.25 million GPD, and an average daily flow of 0.75 million GPD. The WWTP was upgraded in 1992 and has the potential to expand to 2.5 million GPD, with some improvements to the head works structure, control building, electrical service and yard piping, among other improvements.

The WWTP currently treats incoming wastewater to a secondary level using a non-mechanical activated sludge biological treatment process. Effluent is then discharged to the borrow pit, where it is stored during the winter and used for irrigation of 140 acres of alfalfa fields near the Tehachapi Municipal airport during the summer.⁶

Solid Waste

Waste Management, Inc., a private company, provides refuse collection and disposal services to the City of Tehachapi. Waste Management collects residential recyclables and trash collected

⁵ Regional Urban Water Management Plan – 2015, page 4-2.

⁶ Tehachapi General Plan EIR, page 4.14.2-1.

curbside. Solid waste from the City of Tehachapi is currently disposed at the Tehachapi Sanitary Landfill, located approximately four miles east of the City limits. The Tehachapi Sanitary Landfill is a Class III landfill operated by the Kern County Waste Management Department and permitted to accept up to 1,000 tons of solid waste per day. The facility has permitted maximum design capacity of approximately 3.4 million cubic yards. The landfill accepts mixed municipal, construction/demolition, industrial and dead animal waste, and includes a composting facility for green waste. Electronic waste (e-waste) is accepted at all Kern County disposal sites for recycling. Most household and business hazardous wastes are accepted at special facilities in Mojave.

Electricity

Electricity service is provided to the City of Tehachapi by Southern California Edison (SCE), which is a subsidiary of Edison International. SCE focuses on electricity generation and distribution to its customers in Southern California and is regulated by the California Public Utilities Commission. SCE maintains hydropower, coal, and nuclear power generating plants, such as the Big Creek Hydroelectric Plant, the San Onofre Nuclear Generating Station, and the Mojave Generating Station. SCE also purchases power from independent power producers. After the power is produced or bought, it is conveyed to customers via SCE's electric transmission and distribution systems.

Electrical transmission lines owned and operated by the SCE currently traverse the Tehachapi Valley. Transmission lines generally follow transportation corridors and are routed above ground throughout much of the City and the Planning Area. Pursuant to Public Utility Commission regulations, new development is required to place electricity infrastructure underground. Industrial users tie directly into major transmission lines.⁷

Natural Gas

Natural gas is currently supplied and distributed to the City of Tehachapi by the Southern California Gas Company. The Gas Company serves an area bounded by the international border with Mexico to the south, San Gabriel Mountains to the east, Pacific Ocean to the west, and Visalia and San Luis Obispo to the north. The City of Tehachapi is within the Lamont-Arvin, Tehachapi, and Mojave-California City Service Area.

⁷ Tehachapi General Plan EIR, page 4.14.4-1.

Natural gas resources are drawn from naturally-occurring reservoirs primarily located outside the State and delivered via high-pressure transmission lines. As the gas is transported to its destination, the pressure is maintained with the assistance of compressors. The gas is then received at a storage field and redistributed through another series of transmission lines. Natural gas is distributed throughout the City of Tehachapi by a system of transmission, supply, distribution, and service lines. As the pipeline transitions from one transmission line to a supply line, the pressure of the natural gas is regulated down to the most efficient level of pressure for the customer.⁸

Cable Television/Internet

The City of Tehachapi is within the service area of Spectrum TV (through Charter Communications). Spectrum is a local provider of digital cable, high speed internet and voice services. Spectrum's existing infrastructure in the Planning Area consists primarily of overhead lines, with some of the newer lines going underground. Aerial cable fibers are generally collocated with SCE lines on poles, and underground transmission lines are located in a conduit separate from other utilities.

Telephone

Telephone service in the City of Tehachapi is provided by AT&T. Telephone facilities in the Planning Area include both aerial and underground fiber and copper transmission lines. Most of the underground and aerial telephone transmission lines are generally collocated with other utilities on poles or in underground trenches and are constructed in public and roadway rights-of-way to reduce visual and aesthetic impacts and potential safety hazards.⁹

The Project will be required to tie into existing City-operated infrastructure located adjacent to the site.

Regulatory Setting

Federal Agencies and Regulations

Safe Drinking Water Act

⁸ Tehachapi General Plan EIR, page 4.14.4-1.

⁹ Ibid, page 4.14.4-2.

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. The SDWA applies to every public water system in the United States but does not regulate private wells which serve fewer than 25 individuals.

The SDWA authorizes the United States Environmental Protection Agency (EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and manmade contaminants that may be found in drinking water. Originally, the SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments changed the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach is intended to ensure the quality of drinking water by protecting it from source to tap.

Clean Water Act

The Clean Water Act (CWA) is the primary federal legislation governing surface water quality protection. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." Pollutants regulated under the CWA include "priority" pollutants, including various toxic pollutants; "conventional" pollutants, such as biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, oil and grease, and pH; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority. The CWA regulates both direct and indirect discharges.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) program, Section 402 of the CWA, controls direct discharges into navigable waters. Direct discharges or "point source" discharges are from sources such as pipes and sewers. NPDES permits, issued by either EPA or an authorized state/tribe, contain industry-specific, technology-based and/or water-quality-based limits, and establish pollutant monitoring and reporting requirements. (EPA has authorized 40 states to administer the NPDES program.) A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative

analytical data identifying the types of pollutants present in the facility's effluent and the permit will then set forth the conditions and effluent limitations under which a facility may make a discharge.

General Pretreatment Regulations

Another type of discharge that is regulated by the CWA is discharge that goes to a publicly owned treatment works (POTW). POTWs collect wastewater from homes, commercial buildings, and industrial facilities and transport it via a collection system to the treatment plant. Here, the POTW removes harmful organisms and other contaminants from the sewage so it can be discharged safely into the receiving stream. Generally, POTWs are designed to treat domestic sewage only. However, POTWs also receive wastewater from industrial (non-domestic) users. The General Pretreatment Regulations establish responsibilities of federal, state, and local government, industry, and the public to implement pretreatment standards to protect municipal wastewater treatment plants from damage that may occur when hazardous, toxic, or other wastes are discharged into a sewer system and to protect the quality of sludge generated by these plants. Discharges to a POTW are regulated primarily by the POTW itself, rather than the state/tribe or EPA.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the Act as it stands today governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA is an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the EPA to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the federal program.

State Agencies and Regulations

Porter-Cologne Water Quality Act

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the state's water resources. The act established the State Water Resources Control Board and nine Regional Water Quality Control Boards as the

principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and nonpoint sources are regulated. The act authorizes the State Water Resources Control Board to establish water quality principles and guidelines for long-range resource planning including groundwater and surface water management programs and control and use of recycled water.

State Water Resources Control Board

Created by the State Legislature in 1967, the five-member State Water Resources Control Board (SWRCB) allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine Regional Water Quality Control Boards located in the major watersheds of the state. The joint authority of water allocation and water quality protection enables SWRCB to provide comprehensive protection for California's waters. SWRCB is responsible for implementing the CWA and issues NPDES permits to cities and counties through Regional Water Quality Control Boards (RWQCBs). The Planning Area is located within a portion of the state that is regulated by the Central Valley RWQCB.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610–10656). The act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The act describes the contents of the Urban Water Management Plans as well as how urban water suppliers should adopt and implement the plans. It is the intention of the act to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

Senate Bill (SB) 610

SB 610 makes changes to the Urban Water Management Planning Act to require additional information in Urban Water Management Plans if groundwater is identified as a source available to the supplier. Required information includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if non-adjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current California Department of Water Resources publication on that basin. If the basin is in overdraft, that plan must include current efforts to eliminate any long-

term overdraft. A key provision in SB 610 requires that any project subject to the California Environmental Quality Act supplied with water from a public water system be provided a specified water supply assessment, except as specified in the law.

Assembly Bill (AB) 901

AB 901 requires Urban Water Management Plans to include information relating to the quality of existing sources of water available to an urban water supplier over given time periods and the manner in which water quality affects water management strategies and supply.

Senate Bill (SB) 221

SB 221 prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10 percent or more of service connections for public water systems with less than 500 service connections. The law defines criteria for determining “sufficient water supply” such as using normal, single-dry, and multiple-dry year hydrology and identifying the amount of water that the supplier can reasonably rely on to meet existing and future planned uses. Rights to extract additional groundwater, if groundwater is to be used for the project, must be substantiated.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000, and beyond. Solid waste plans are required to explain how each city’s AB 939 plan will be integrated with the respective county plan. They must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal.

Regional

Regional Water Quality Control Board, Central Valley Region

The Central Valley RWQCB provides planning, monitoring, and enforcement techniques for surface and ground water quality in the Central Valley region, including the City of Tehachapi. The primary duty of the RWQCB is to protect the quality of the waters within the region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for

specific ground or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic and industrial waste discharges.

Water Reuse Requirements (Permits)

The Central Valley RWQCB issues water reuse requirements (permits) for projects that reuse treated wastewater. These permits include water quality protections as well as public health protections by incorporating criteria established by DPH in Title 22. The Central Valley RWQCB may also incorporate requirements into the permit in addition to those specified in Title 22. These typically include periodic inspection of recycled water systems, periodic cross-connection testing, periodic training of personnel that operate recycled water systems, maintaining a database and/or permitting individual use sites, periodic monitoring of recycled water and groundwater quality, and periodic reporting.

Waste Discharge Requirements

The Central Valley RWQCB typically requires a Waste Discharge Requirement (WDR) permit for any facility or person discharging or proposing to discharge waste that could affect the quality of the waters of the state, other than into a community sewer system. Those discharging pollutants (or proposing to discharge pollutants) into surface waters must obtain an NPDES permit from the Central Valley RWQCB.

The NPDES serves as the WDR. For other types of discharges, such as those affecting groundwater or in a diffused manner (e.g., erosion from soil disturbance or waste discharges to land), a Report of Waste Discharge (WDR) must be filed with the Central Valley RWQCB in order to obtain WDRs. For specific situations, the Central Valley RWQCB may waive the requirement to obtain a WDR for discharges to land or may determine that a proposed discharge can be permitted more effectively through enrollment in a general NPDES permit or general WDR.

Kern County Integrated Regional Water Management Plan

In 2002, voters in California passed Proposition 50 (Prop 50), the Water Security, Clean Drinking Water, Coastal and Beach Protection Act. Central to Prop 50 is the preparation of Integrated Regional Water Management Plans (IRWMPs). IRWMPs define the region and identify the strategies that allow for regional management of water resources in at least four main areas: water supply, groundwater management, ecosystem restoration, and water quality. The IRWMP summarizes regional goals and objectives and identifies strategies, projects, and programs intended to fulfill those goals and objectives.

The IRWMP also serves as a comprehensive approach to determine the appropriate mix of demand and supply management options that provide long-term, reliable water supply at the lowest reasonable cost and with the highest possible benefits to customers, economic development, and the environment.

Draft updates of the adopted Kern County IRWMP, which encompasses the Kern County portion of the Tulare Lake Basin, are currently being circulated for review. The City of Tehachapi and the TCCWD are participants in the IRWMP.

Local

City of Tehachapi Municipal Code

The City of Tehachapi has not adopted a Domestic Water Master Plan. However, the City has an extensive Water Code (Chapters 13.04, 13.08, 13.20, and 13.24 of the Municipal Code) for administering water service, water rights, water conservation, and floodplain management.

The City of Tehachapi has not adopted a Sanitary Sewer Master Plan. However, the City regulates sewer service pursuant to Chapters 13.07 and 13.12 of the Municipal Code. The City Council has determined that new development is required to pay a development impact fee in order to finance the development's fair share of the construction costs of public improvements.

Tehachapi General Plan Policies

Sustainable Infrastructure Element

Watershed and Water Supply

Objective 1 Protect the overall health of the watershed.

- | | |
|------------|---|
| Policy SI1 | Protect stream corridors and recharge areas from development. |
| Policy SI2 | Locate and map all aquifer recharge locations. |
| Policy SI3 | Improve quality of urban stormwater runoff before discharging to water body or infiltration into aquifer. |
| Policy SI4 | Incorporate low impact design stormwater best management practices (BMPs). |

Objective 2 Reduce discharge volumes.

- | | |
|------------|---------------------------------|
| Policy SI5 | Reuse stormwater flows on site. |
|------------|---------------------------------|

- Policy SI6 Where soils allow for infiltration, promote infiltration into groundwater basin.
- Policy SI7 Reduce imperviousness.
- Policy SI8 Slow stormwater runoff through low impact design BMPs.
- Policy SI9 Naturalize channels whenever possible to maximize recharge opportunities.
- Policy SI10 Discourage large scale retention basins in favor of a decentralized approach, accommodating as much runoff on site as possible to minimize standing water, maximize infiltration, and improve aesthetics. Vegetated BMPs should be landscaped with native, drought tolerant plantings which conserve water and are cost effective.

Objective 3 Protect and conserve groundwater resources.

- Policy SI11 Develop an Urban Water Management Plan in accordance with state requirements.
- Policy SI12 Continue to perform Water Source Assessments.
- Policy SI13 Require new, high consuming users to secure an alternative water source other than groundwater.
- Policy SI14 Reuse stormwater for on-site irrigation.
- Policy SI15 Provide incentives for disconnecting downspouts.
- Policy SI16 Support the development of future sources of water, including recycled water or TCCWD water for common area landscape irrigation.
- Policy SI17 Require new development to contribute to the cost of upgrading the wastewater treatment plant to tertiary level.
- Policy SI18 Require new development outside of the adjudicated groundwater basin to identify its source of water.
- Policy SI19 Avoid potential contaminants near vulnerable wells.
- Policy SI20 New developments should utilize public water and sewer systems.

Utility Infrastructure

Objective 1 Ensure adequate infrastructure capacity.

- Policy SI21 As identified in Figure 2-1 (Community Structure Plan), priority should be given to infill development located adjacent to existing infrastructure in order to decrease the need and expense for extensions of the backbone grid.
- Policy SI22 Prepare and regularly update Stormwater, Domestic Water and Sanitary Sewer Master Plans which will deal with orderly system expansion, funding requirements and design standards.
- Policy SI23 Provide dual plumbing for all new public parks and landscape projects in anticipation of future water recycling or water re-use infrastructure to be used for irrigation.
- Policy SI23A Provide adequate domestic water distribution capacity per the following intervals:
- a. Minimum 12-inch lines at section lines;
 - b. Minimum 10-inch lines at quarter-section lines;
 - c. Minimum 8-inch lines within quarter-sections.
- Policy SI23B Provide adequate sanitary sewer capacity per the following:
- a. Minimum 8-inch lines;
 - b. Minimum 4-inch laterals.

Objective 2 Incorporate low impact development BMP's at all scales of the community.

- Policy SI24 Use low impact development BMP's such as the following to address stormwater and improve water quality.
- a. Decentralize stormwater basins, accommodating as much runoff on-site as possible.
 - b. Improve surface water quality through increased use of bioretention basins and infiltration measures where possible.

- c. Require that 5% of all impervious surfaces will function as on- site bioretention or infiltration.
- d. Convey stormwater through natural courses whenever possible rather than through pipes.
- e. Encourage disconnection of downspouts from storm drain system.
- f. Encourage stormwater reuse.
- g. Combine open space areas with stormwater management wherever possible.

- Policy SI25 Provide dual plumbing for all new public developments in anticipation of future water recycling or water re-use infrastructure.
- Policy SI26 Private development is responsible for installing all local water and sewer lines within a development.

Energy

Objective 1 Promote energy conservation and the development of renewable energy sources.

- Policy SI30 Integrate energy efficiency measures into regulations and standards for land use, zoning, site orientation, building, housing, infrastructure, transportation, power and transmission, water and waste.
- Policy SI31 Provide rebates/incentives for ENERGY STAR® appliances, compact fluorescent light bulbs, dual pane windows, appliance recycling and home insulation.
- Policy SI32 Promote the use of “cool roofs,” which reflect the sun’s heat back to the sky rather than transferring it to the building.
- Policy SI33 Shade south and west facing windows where possible.
- Policy SI34 Promote the use of solar panels in all development, especially when building, acquiring, or retrofitting public facilities.
- Policy SI35 Select materials for rooftop technology that are sensitive to the visual needs of pilots in the area.

Objective 2 Promote transportation efficiency and reduce peak demand

Policy SI36 Periodically assess energy supply and demand, research supply sources and management options and integrate electrical energy planning into all planning and decision-making.

Objective 3 Increase use of renewable energy.

Policy SI37 Continue to pursue local energy supply management and distribution opportunities.

Policy SI38 Develop an incentive program to assist with business and/or home renewable energy systems such as solar panels and wind power.

Policy SI39 Apply the California Solar Rights Act of 1978, which authorizes cities and counties to require solar easements as a condition of subdivision approval to assure each parcel or unit the right to receive sunlight across adjacent parcels or units for any solar energy system.

Methodology

The analysis considered current conditions of the Project site and applicable laws, regulations and guidelines pertaining to utilities. Various databases, planning documents (including the Regional Urban Water Management Plan), technical studies and maps were reviewed to assist in the environmental evaluation. Specific references are noted in the text.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- 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?
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
- 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?

- 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?
- 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?

Impacts and Mitigation Measures

Impact 3.19-1: *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Less Than Significant Impact With Mitigation. Implementation of the proposed Project would include up to 1,000 residential units on the site. The Project will require that utilities be extended to serve the proposed development, including water, wastewater, stormwater, electric power, natural gas and telecommunications facilities. Extension of utilities will be the responsibility of the Project Developer. The Project will be subject to water and sewer modeling to determine any needed improvements to or additions to the City's existing infrastructure. The improvements required to tie into existing utilities are included in the Project Description, the environmental impacts of extending these utilities are analyzed within this EIR under the various CEQA Appendix G topics. Numerous mitigation measures have been included throughout this document which are applicable to these activities. In addition, the Project will be subject to various development impact fees as determined by the City in order to construct any necessary on- or off-site improvements required in order to provide adequate utilities (See Mitigation Measures HYD – 3 and UTIL – 1).

Wastewater / Sewer

The Project site is located within the service territory of the Tehachapi Wastewater Treatment Plant (WWTP). Since the WWTP is considered a publicly owned treatment facility, operational discharge flows treated at the WWTP would be required to comply with applicable water discharge requirements issued by the Regional Water Quality Control Board (RWQCB). Compliance with conditions or permit requirements established by the City as well as water discharge requirements outlined by the RWQCB would ensure that wastewater discharges coming from the proposed Project site and treated by the WWTP system would not exceed applicable Central RWQCB wastewater treatment requirements. See also Response 3.19-3 which describes the Project's wastewater demands and the City's capacity to handle those demands.

Stormwater

As discussed in Section 3.10 - Hydrology and Water Quality, the proposed Project would result in new impervious areas associated with site improvements and would therefore require new storm water drainage facilities. The proposed Project would install storm water drainage facilities (e.g. storm drainage mechanisms and storm water pipes) that would be in compliance with the City of Tehachapi Development Standards and Kern County Hydrology Manual. See Appendix F for detailed information regarding Project specific basin design and stormwater capacity. A drainage and storage plan has been developed that will ensure Project impacts are less than significant.

Water Supply

As discussed in Response 3.19-2 below and Section 3.10 - Hydrology and Water Quality, the Project will add demand for water to the City of Tehachapi water system. The Project will be required to secure non-potable water for public exterior landscaping, pay development impact fees for water, and provide the necessary on-site water infrastructure.

Other Utilities

The Project will be required to access public utilities for electric power, natural gas and solid waste disposal. Based on the analysis herein, it is not anticipated that off-site improvements would be required for these facilities.

Thus, with incorporation of mitigation measures, the proposed Project's impacts associated with acquisition of utilities would be less than significant.

Mitigation Measures: The mitigation measures throughout this document are also applicable to the on-site improvements associated with installation of adequate utilities. Please refer to the mitigation monitoring and reporting program for the full list of applicable mitigation.

Impact 3.19-2: *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

Less Than Significant With Mitigation. The proposed Project would add demand for water to the City of Tehachapi water system, which is generally reliant on groundwater to serve its customers. The information herein is based on the Water Supply Assessment that was prepared

for the Project (Appendix E). This water supply information is also contained in part in Section 3.10 – Hydrology and is duplicated here.

Assumptions

Project water demand is estimated using information from the City’s adopted 2015 Urban Water Management Plan (UWMP), as well as from a more recent water use information from the June 2019 *City of Tehachapi – Water and Sewer Systems Modeling, Planning, and Fee Studies Update* prepared by Michael K. Nunley and Associates. Project water demand is calculated on the following assumptions:

- Residential: The Project is proposing 1,000 residential units (see Table 1-2 for the breakdown of housing types).
- Public Parks: The Project includes approximately 9 acres of park space distributed among five parks throughout the proposed development. To be conservative, it is assumed that the entire park space acreage will be irrigated lawn and will require approximately 5 acre-feet of water per acre per year. This figure is based on existing water use at Warrior Park (located approximately ¼ mile southwest of the Project site) as well as information pertaining to water requirements for large irrigated lawns such as golf courses in the region.
- Per Capita Water Use: The average residential water use in gallons per capita per day (GPCD) for calendar years 2017-2018 in the City of Tehachapi was 118 GPCD per person,¹⁰ which is based on readings from metered residential customers. This figure will be used to calculate projected water demand from the Project. This is inclusive of water used for outdoor landscaping.
- Public Areas / Landscaping: In addition to park space, the outdoor public spaces (excluding backyards) will be maintained by a Homeowners Association (HOA). Although the 118 GPCD estimate includes water used for outdoor landscaping, the Project will not utilize potable water for public outdoor space landscape irrigation (with the exception of private backyards). See *Measures to Reduce Potable Water Use* for more information pertaining to outdoor water use.
- Household Size: According to the 2018 U.S. Census for Tehachapi, the City averages 2.63 persons per household. Although some of the housing products / floor plans proposed by

¹⁰ City of Tehachapi – *Water and Sewer Systems Modeling, Planning and Fee Studies Update*(Memo #3), MKN (June 2019), Page 9, Table 5-2.

the Project would likely result in fewer than 2.63 persons per residence, the figure is being used to conservatively estimate Project water demand.

Project Water Demand

Based on the above assumptions, Project water demand is calculated as follows:

Residential: 1,000 dwelling units X 2.63 persons per dwelling unit = 2,630 persons X 118 GPCD = 310,340 total gallons per day X 365 days per year = 113,274,100 gallons per year (or **~348 acre/feet/year**)

Parks: 9 acres X 5.0 acre/feet/year = **~45 acre/feet/year**

Total Water Demand: 348 acre/feet/year for Residential
45 acre/feet/year for Parks
393 acre/feet/year

It is anticipated that the Project would require approximately 393 acre/feet/year of water. The next section identifies measures to reduce the amount of potable water required for the Project.

Measures to Reduce Potable Water Use

As identified above, the proposed Project would use approximately 393 AFY of water per year. To offset the amount of potable water being utilized by the Project, the City will require the following measures:

1. The ~9 acres of parks / public space, as well as the outdoor spaces maintained by the HOA will be irrigated with non-potable water from TCCWD. TCCWD provides a reasonably reliable water source either from Basin return flows or from SWP. However, since outdoor landscaping is considered non-critical, the water available for outdoor public spaces may be limited during severe drought conditions.
2. Even though the Project will use non-potable water for outdoor irrigation (with the exception of backyard spaces), the Project is designed to use less water per unit for landscaping than a typical single family residential development. As previously mentioned, the 118 GPCD estimate includes water used for outdoor irrigation. In California, particularly non-coastal areas, outdoor irrigation can often exceed 50% of total potable water use in residential developments. However, it is anticipated that the proposed Project would use significantly less water for outdoor irrigation because of the

relatively small lots with minimal outdoor space available for extensive landscaping. Most of the housing products consist of multi-family patio/court homes, townhomes and apartments (737 units), with the remaining 263 units consisting of single family residential houses on small lots ranging from 4,200 to 5,500 square feet. Because of the relatively small lot sizes and the high number of multi-family housing products, there is limited opportunity for extensive landscaping. In addition, the Project is subject to the Model Water Efficient Landscape Ordinance (MWELO) which encourages more efficient irrigation systems, onsite stormwater capture, limiting turf, etc. By incorporating these factors, it is conservatively estimated that the Project would use at least 20% less than the 118 GPCD estimate for potable water use, or 95 GPCD.

Project Water Demand After Reduction Measures

As identified previously, the Project would use approximately 393 AFY of potable water unmitigated. The measures identified above would result in the following potable water savings:

- 45 acre/feet/year in potable water savings by using non-potable water for parks (based on an estimated 5 acre/feet/year per acre of park space).
- 68 acre/feet/year in potable water savings by using non-potable water for outdoor public areas (not including backyards). This is based on 1,000 dwelling units X 2.63 persons per dwelling unit = 2,630 persons X 95 GPCD = 249,850 total gallons per day X 365 days per year = 91,195,250 gallons per year (or ~280 acre/feet/year). Unmitigated residential water use is 348 acre/feet/year. Mitigated residential water use is 280 acre/feet/year which results in a net savings of 68 acre/feet/year.

This results in a savings of 113 acre/feet/year in potable water use. Total anticipated potable water use from the Project after implementation of reduction measures is approximately **280 acre/feet/year** ($393 - 45 - 68 = 280$).

City-Wide Future Estimated Water Use

The City pumps groundwater from the adjudicated Tehachapi Groundwater Basin and is allowed 1,847 acre-feet of groundwater pumped per year. The City can purchase imported SWP water from TCCWD to meet demands in excess of its groundwater allocation. These supplies are delivered to the City through groundwater recharge. According to the Greater Tehachapi RUWMP (2015), the projected available water supply (shown in five-year increments) for the City is as follows:

<u>Year</u>	<u>Projected Acre-Feet-Year of Available Water Supply¹¹</u>
2020	2,242 AFY
2025	2,347 AFY
2030	2,458 AFY
2035	2,575 AFY

More recent information about projected water demand within the City is in the *Water and Sewer Systems Modeling, Planning, and Fee Studies Update, Technical Memorandum #3* prepared by Michael K. Nunley and Associates. The Technical Memorandum provides a summary of projected future water demands associated with 10 years of anticipated development within the City. The proposed Project site was evaluated in the study and assumed the site would be built out with 150 single-family units and 350 multi-family units.¹² Based on 2.63 people per unit and 118 GPCD, it was assumed the site would require approximately 174 acre/feet/year. However, as identified herein, the proposed Project would require approximately 280 acre/feet/year of potable water, a difference of 106 acre/feet/year from the projected/estimated water demand for the site. Because the City is restricted in its groundwater extraction, the Applicant will be required to secure some potable water from alternate sources.

Acquisition of Water

The City purchases SWP water from TCCWD to meet its demands in excess of its groundwater allocation and stores at least a 5-year supply. It is anticipated that the City can provide 100% of average supplies in every year.¹³ See Section 4.0 for an evaluation of dry-year adequacy.

The Applicant will be required to secure/purchase water rights to serve the Project and/or pay in-lieu fees as determined by the City (for the City to purchase additional water for recharge). As discussed previously, Project water supply will likely occur from a combination of sources including acquisition of non-potable agricultural water (for public space outdoor irrigation), purchase/acquisition of potable water, and payment of City water fees. Each housing unit shall pay the water rights fee in place at the time of permit issuance. Alternatively, at the discretion of

¹¹ Greater Tehachapi RUWMP (2015), page 4-15, Table 4:6-9.

¹² City of Tehachapi – *Water and Sewer Systems Modeling, Planning and Fee Studies Update* (Memo #3), MKN (June 2019), Page 12, Table 5-5.

¹³ Regional Urban Water Management Plan – 2015, page 4-17.

the City, the Applicant shall construct an equivalent water savings project that has the effect of reducing current potable water demand elsewhere in the City, as an “in-lieu” method of achieving the water demand requirements of the Project. This shall be made a condition of Project approval.

Mitigation Measures:

HYD - 2: All outdoor public landscaping, with the exception of private back or side yards, shall be irrigated with non-potable water. The Project will be required to secure the non-potable water prior to issuance of building permits.

HYD - 3: The Project proponent shall procure per-unit water rights sufficient to meet the projected water demand as calculated in the Project Water Supply Assessment (Appendix E). Alternatively, the Project shall pay a per-unit water rights entitlement fee in accordance with City ordinances to this same effect. This shall be made a condition of Project approval.

Impact 3.19-3: *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?*

Less Than Significant With Mitigation. The City of Tehachapi operates and maintains all sewage pipelines and collection systems in the City. The WWTP has 2 equalization tanks (in parallel), a trickling filter, 14 evaporation/percolation ponds for effluent disposal, and a 140-acre parcel for application discharge.¹⁴ The collection system includes 40 miles of sanitary sewer lines. The WWTP is capable of treating 1.25 million GPD and is designed to treat to secondary levels and is in compliance with state and federal regulations. According to the June 2019 *Existing Water Demand and Sewer Flow Analysis*, the average daily WWTP influent flow for years 2017 and 2018 was 0.76 million GPD¹⁵. Based on this information, excess capacity at the WWTP is approximately 0.5 million GPD, which means the facility is operating at approximately 60 percent of its permitted capacity.

¹⁴ GTA Specific Plan Existing Conditions Report, page 56.

¹⁵ City of Tehachapi – *Water and Sewer Systems Modeling, Planning and Fee Studies Update* (Memo #2), MKN (June 2019), Page 10, Table 7-3.

Project Wastewater (Sewer) Demands

The *Water Demand and Sewer Flow Analysis* Technical Memorandum prepared in June 2019 estimates City-wide sewer flows based on the percentage of water consumed by City customers that is returned to the sewer collection system as wastewater. According to that document, the average single-family home in the City returns 57% of water to the sewer system and multi-family residences return approximately 50% of water to the sewer system¹⁶. The Project is proposing 263 single-family residences and 737 multi-family units. The combination of single-family and multi-family housing types for the Project results in an approximate average of 52% of water being returned to the sewer system, if evaluating the mix of housing types at full buildout of the Project.

As previously described, Project water demand is estimated to be 312 acre/feet/year in potable water use, which is equivalent to 101,754,700 gallons per year or 278,780 gallons per day. Using the estimate of 52% of water being returned to the City's sewer system, the Project would generate approximately 133,814 GPD of wastewater at full buildout (278,780 minus 52% or 144,966 = 133,814 GPD).

City-wide Future Estimated Wastewater Production

As mentioned earlier, the average daily intake of the City's WWTP (averaged between 2017 and 2018) is approximately 750,000 GPD. The City's current 2019 population is approximately 9,600. It is important to note that the Tehachapi Prison has its own WWTP and therefore even though the City's population numbers indicate a population above 14,000 (inclusive of the prison population), the actual population that is using the City's WWTP is closer to 9,600. The General Plan 2035 buildout scenario projected a population of 14,201 for the year 2035 (not including the prison). This equates to an increase of approximately 48% over current population levels.

The *Water Demand and Sewer Flow Analysis* Technical Memorandum estimates City-wide sewer flows based on the percentage of water consumed by City customers that is returned to the sewer collection system as wastewater. According to that document, the City returns an average of 61% of water to the sewer system¹⁷. This is inclusive of all water users in the City including commercial

¹⁶ Ibid. page 21, Table 9-6.

¹⁷ City of Tehachapi – *Water and Sewer Systems Modeling, Planning and Fee Studies Update* (Memo #2), MKN (June 2019), Page 15, Table 9-1.

users, schools, and residential, rather than just the residential figures (52% of water to sewer) used to calculate the Project's wastewater flows.

When applying a straight line comparison to the WWTP capacity, at year 2035 buildout of the General Plan, the City would be producing approximately 1.13 million GPD of wastewater based on a population of 14,201 (using the years 2017-2018 average of 0.76 million GPD for a population of 9,600 people, a population increase of 48% (4,601 people) would increase sewer flows by 364,800 GPD to a total of 1.13 million GPD at buildout of the General Plan). Using these figures, Project-generated wastewater can be accommodated within the City's current 1.25 million GPD wastewater treatment capacity.

Even if there are no improvements or expansions made to the WWTP over the next 15 years, the City is still likely to have WWTP capacity to support the growth identified in the City's General Plan. However, the City is currently investigating potential water saving methods such as improving treatment methods in order to allow recycled water for other uses. Therefore, because of the existing capacity at the WWTP, the proposed Project wastewater can be accommodated. In addition, the Project would be required to pay sewer fees upon issuance of a building permit, thereby offsetting the costs associated with acceptance of the Project wastewater (Mitigation Measure UTIL-1).

Wastewater Characteristics

Wastewater from the City is treated at the City's WWTP and is predominantly domestic wastes, with some light industrial discharges, and is governed by Waste Discharge Requirements Order No. 91-153, adopted by the Central Valley Regional Water Quality Control Board (CVRWQCB) on June 28, 1991. The WWTP utilizes an activated sludge process, which is a biological process where microorganisms are given an adequate amount of oxygen, allowing them to break down the organic matter in wastewater. In 2012, the City completed various upgrades to the WWTP including a sludge dewatering press that accepts wet sludge, mixing it with a polymer before squeezing it into a dry cake for disposal.

The Project would generate wastewater with similar characteristics to discharge produced by other uses in the City, including similar in content to the residential land uses in the immediate area (typical residential wastewater from toilets, sinks, showers, etc.). There are no non-residential uses that would introduce atypical wastewater characteristics. Wastewater generated by the Project would be collected and treated at the City's WWTP. Because of the typical nature of the Project wastewater, and the fact that the WWTP is currently in compliance with their Waste Discharge Requirements, the Project will not cause the City to exceed any wastewater treatment

requirements from the RWQCB. In addition, the Project would be required to pay sewer fees upon issuance of a building permit, thereby offsetting the costs associated with acceptance of the Project wastewater (Mitigation Measure UTIL-1), and ensuring the impact remains less than significant.

Mitigation Measures:

UTIL-1: Prior to issuance of building permits, the Project Applicant shall pay impact fees for its fair share of sewer services. The fee, or equivalent in-lieu, will be determined by the City of Tehachapi.

Impact 3.19-4: *Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Less Than Significant. Proposed Project construction and operation will generate solid waste. Waste Management, Inc., a private company, provides refuse collection and disposal services to the City of Tehachapi. Separate cans for waste and recyclables are provided in the City. Solid waste from the City of Tehachapi is currently disposed at the Tehachapi Sanitary Landfill, located approximately four miles east of the City limits. The Tehachapi Sanitary Landfill is a Class III landfill operated by the Kern County Waste Management Department and permitted to accept up to 1,000 tons of solid waste per day. The facility has permitted maximum design capacity of approximately 3.4 million cubic yards. The landfill accepts mixed municipal, construction/demolition, industrial and dead animal waste, and includes a composting facility for green waste. Electronic waste (e-waste) is accepted at all Kern County disposal sites for recycling. Most household and business hazardous wastes are accepted at special facilities in Mojave.

Project Construction

Construction of the proposed Project would generate solid waste (in the form of construction debris) that would need to be disposed of at area landfills. Construction debris includes concrete, asphalt, wood, drywall, metals, and other miscellaneous and composite materials. Much of this material would be recycled and salvaged to the maximum extent feasible. Materials not recycled would be disposed of at local landfills. The Project site is currently undeveloped. There would not be any demolition and most of the solid waste generated by the construction phase of the proposed Project would be recycled in accordance with AB 939.

Site preparation (vegetation removal and grading activities) and construction activities would generate construction debris, including wood, paper, glass, plastic, metals, cardboard, and green wastes. Construction activities could also generate hazardous waste products. The wastes generated would result in an incremental and intermittent increase in solid waste disposal at the Tehachapi Landfill. However, with implementation of recommended mitigation measures as well as compliance with Federal, State, and local statutes or regulations, a less than significant impact would occur.

Project Operation

The proposed Project is a residential Project. According to the City's General Plan, the City has a generation rate of 4.4 pounds per person per day and a 68 percent recycling or waste diversion rate.¹⁸ Using this figure, the City's 2019 population (9,609 non-incarcerated persons) generates approximately 13,530 pounds or 6.77 tons per day (9,609 people X 4.4 pounds/day = 42,280 pounds/day of solid waste, minus 28,750 pounds/day from the 68% recycle/diversion rate, for a total average of 13,530 pounds/day or 6.77 tons/day).

Using this same methodology, the proposed Project would generate approximately 3,703 pounds or 1.85 tons of solid waste per day (1,000 dwelling units X 2.63 persons per dwelling unit X 4.4 pounds/day = 11,572 pounds/day of solid waste, minus 7,869 pounds/day from the 68% recycle/diversion rate, for a total estimate of 3,703 pounds/day or 1.85 tons/day).

The proposed Project would be required to comply with applicable state and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. The amount of solid waste generated by the proposed Project that would not be diverted or recycled represents less than 1/10 of 1 percent of the daily capacity of the Tehachapi Landfill and could be accommodated. However, KCWMD has other landfills with capacity to accommodate solid waste materials that have a longer life such as the Taft Landfill with remaining capacity of approximately 6.7 million tons with a cease operation of 2123 in addition to other County landfills. The proposed Project would be required to comply with applicable State and local regulations, thus reducing the amount of landfill waste by at least 50 percent. With adequate landfill capacity at KCWMD landfills and compliance with regulations, a less than significant impact would occur.

Mitigation Measures: None are required.

¹⁸ Tehachapi General Plan EIR, page 4.14.3-1.

Impact 3.19-5: *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Less Than Significant. See Response to Impact 3.19-4. The Project will comply with all federal, state and local statutes and regulations related to solid waste.

Mitigation Measures: None are required.

Chapter 4

CUMULATIVE IMPACTS

CUMULATIVE IMPACTS

4.1 Introduction

Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a proposed project when the project's incremental effect is cumulatively considerable. Cumulative impacts refer to two or more individual effects that, when combined, are considerable or that compound or increase other environmental impacts. The purpose of the cumulative impact analysis is to identify and summarize the environmental impacts of the proposed project in conjunction with existing, approved, and anticipated development in the project area. Since impacts associated with aesthetics, agricultural/farmland conversion, cultural resources, energy, geology/soils, hazards/hazardous materials, mineral resources, recreation, tribal cultural resources and wildfire were determined to be less than significant in the Project's Initial Study / Notice of Preparation (See Appendix A), cumulative impact analysis is not included for those impact areas.

The CEQA Guidelines allow for the use of two alternative methods to determine the scope of projects for the cumulative impact analysis:

- List Method – a list of past, present and probable future projects producing related or cumulative impacts, including, if necessary those projects outside the control of the agency.
- General Plan Projection Method – A summary of projections contained in an adopted General Plan, or related planning document, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

The cumulative impacts analyses in this document is based on the General Plan Projection Method from the 2030 City of Tehachapi General Plan (and its EIR) and associated documents (CEQA Guidelines Section 15130(1)(B)). The only exception is the cumulative impacts analysis for Transportation/Traffic impacts which analyzes impacts up to year 2040.

The proposed Project's contribution to environmental impacts under cumulative conditions is based on full buildout of the Sage Ranch Development Project. See Section 2 – Project Description for a complete description of the Project.

Some cumulative impacts for issue areas are not quantifiable and are therefore discussed in general terms as they pertain to development patterns in the surrounding region. In consideration

of the cumulative scenario described above, the proposed Project may result in the following cumulative impacts:

4.1 Air Quality (Section 3.3)

As growth continues in the Air Basin, attainment of air quality standards will become more difficult, even though overall air quality has improved. Currently approved and proposed cumulative development planned in Kern County and surrounding region will result in continual urban development.

The Eastern Kern Air Pollution Control District (EKAPCD) Guidelines for Implementation of CEQA states that *“Unless otherwise specified in published/adopted thresholds of significance and guidelines, a project’s potential contribution to cumulative impacts shall be assessed utilizing the same significance criteria as those for project specific impacts”*². Based on the analysis conducted for this project, it is individually *less than significant*. This AQIA, however, also considered impacts of the proposed project in conjunction with the impacts of other projects previously proposed in the area. The following cumulative impacts were considered:

- Cumulative O₃ Impacts (ROG and NO_x) from numerous sources within the region including transport from outside the region. O₃ is formed through chemical reactions of ROG and NO_x in the presence of sunlight.
- Cumulative CO Impacts produced primarily by vehicular emissions.
- Cumulative PM₁₀ Impacts from within the region and locally from the various projects. Such projects may cumulatively produce a significant amount of PM₁₀ if several projects conduct grading or earthmoving activities at the same time; and
- Hazardous Air Pollutant (HAP) Impacts on sensitive receptors from within the recommended screening radius of one mile.

A one-mile radius for cumulative project analysis is required within the City of Tehachapi. The cumulative analysis quantifies operational and area impacts proposed by the project as well as all identified projects within close proximity (one-mile) of the project site. The analysis quantifies operational emissions from these other projects to determine the impacts to the air basin posed by these sources with the increases proposed by the subject project. These emissions are then compared to the proposed growth and anticipated emissions increases included in the various regional growth forecasts to determine 1) if they were included in the forecast; 2) if their inclusion can be considered consistent with the attainment plan for air emissions within the air basin; and 3) if these emissions are in conformance with the State Implementation Plan emission budget or baseline emissions for ROG, NO_x, CO and PM₁₀.

A review of cumulative operational emissions shows that the proposed Project would result in a less than cumulatively considerable impact (See Appendix B Tables 5-1 through 5-4 for a breakdown of cumulative emissions associated with the Project). Therefore, evaluation of the cumulative air emissions supports a finding that the Project's contribution would not be cumulatively considerable because the proposed Project's incremental emissions would be less than significant.

Generally, cumulative impacts from air emissions are more typically associated with greenhouse gases / climate change. Refer to Section 4.3 in this section for a discussion of cumulative greenhouse gas / climate change impacts.

4.2 Biological Resources (Section 3.4)

The cumulative setting for biological resources includes the greater Tehachapi region. Development associated with implementation of the Tehachapi General Plan and Kern County General Plan would contribute to the ongoing loss of natural and agricultural lands in the area. Cumulative development would result in the conversion of existing habitat to urban uses. The City's General Plan EIR, in addition to regional, State and federal regulations, includes policies and measures that mitigate impacts to biological resources associated with General Plan buildout.

As described in Section 3.4 Biological Resources, there are no known special-status species that have been observed on the project site. Mitigation Measures identified in Section 3.4 reduces all potential impacts to biological resources to less than significant levels. As development occurs in the region, the City will review projects on a case-by-case basis at the time each is considered for approval. Most projects in the region would generally occur within or around urban areas that have either been previously disturbed or are near existing urban development. However, some future projects may occur on undeveloped portions of the City that may result in potentially significant impacts to biological resources. However, these projects would likely be required to implement mitigation measures similar to those for the proposed Project in order to reduce these potential impacts to less than significant levels. Compliance with applicable state and federal permit requirements for these resources would be required for all future projects, which would ensure that these projects would not significantly affect sensitive biological resources or contribute to a cumulatively significant impact to such resources in the area. Implementation of the proposed Project would have a less than significant cumulative impact relative to this environmental topic. As such, impacts to biological resources would be less than cumulatively considerable.

4.3 Greenhouse Gases (Section 3.8)

Greenhouse gases and global climate change impacts are essentially considered cumulative impacts rather than project-specific impacts. As identified in Section 3.8 Greenhouse Gases, the Project will have a less than significant impact associated with this impact. CEQA Guidelines Section 15130 notes that sometimes the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis. Global climate change is this type of issue. The causes and effects may not be just regional or statewide, they may also be worldwide. Given the uncertainties in identifying, let alone quantifying the impact of any single project on global warming and climate change, and the efforts made to reduce emissions of GHGs from the Project through design, in accordance with CEQA Section 15130, any further feasible emissions reductions would be accomplished through CARB regulations adopted pursuant to AB32. As demonstrated in Table 4-9 of Appendix B, the cumulative impacts of the Project to global climate change be below the GHG thresholds of significance established by the EKAPCD.

Therefore, the cumulative impacts to global climate change / greenhouse gases would be less than significant.

4.4 Hydrology and Water Quality (Section 3.10)

The geographic area for cumulative hydrology analysis is the land area included in the Tehachapi Groundwater Basin. Buildout of the City's General Plan and other pending projects in the Basin area will contribute to changes to stormwater collection systems and groundwater quality as well as an increase in water supply (groundwater) depletion. As discussed in Section 3.10 Hydrology and Water Quality, as well as the SB 610 Water Supply Assessment that was prepared, the Project will not result in significant impacts related to this impact area.

Development of the Project in combination with future projects associated with buildout of the General Plan would increase the amount of impervious surfaces in the area. Stormwater runoff is typically directed into adjacent streets where it flows to the nearest drainage system. As with the Project, each new development would be required to design and develop a stormwater collection system that ensures appropriate water quality protection measures and sufficient capacity. All projects would be required to implement Best Management Practices and to conform to the existing NPDES water quality regulations. Therefore, cumulative impacts associated with stormwater collection and water quality is less than significant.

Tehachapi has historically used groundwater with occasional purchases from Tehachapi-Cummings County Water District to meet all of their water demands. As identified in Section 3.10 – Hydrology and the SB 610 Water Supply Assessment, the City anticipates being able to provide adequate potable water to the region through the year 2035. The project's cumulative impacts on hydrology and water quality are thus considered less than cumulatively considerable.

However, the City recognizes that its annual water consumption is typically greater than its annual allocation and this is not sustainable. As such, the City has and/or is planning to implement several mechanisms to address this shortfall. These include use of recycled water, increased groundwater recharge projects and water conservation methods.

4.5 Land Use and Planning (Section 3.11)

The cumulative setting for Land Use / Planning impacts is the City's Planning Area, which according to the General Plan encompasses approximately 15,067 acres, of which 5,082 acres are located in the City and 9,978 acres are located in the Sphere of Influence. Under this environmental category, significant impacts are identified if a project will divide an established community and/or conflict with land use plans/policies. As shown in Section 3.11, the proposed Project will not divide an established community nor would it substantially conflict with any land use plans or policies.

As development occurs in within the Planning Area, the City will review projects on a case-by-case basis at the time each is considered for approval. Most future projects in the region would generally occur on lands that have been designated for their appropriate uses. However, some future projects may occur on portions of land that have underlying zoning or land use designations that are not appropriate for a potential future project. The City would be required to evaluate such projects and provide the appropriate entitlements on a case by case basis after evaluating each project. Compliance with the City's General Plan policies and procedures will ensure that future developments do not divide established communities nor conflict with applicable land use policies. As such, cumulative impacts to land use and planning would be less than cumulatively considerable.

4.6 Noise (Section 3.13)

The cumulative setting for Noise impacts consists of the existing and future noise sources that could affect the proposed Project or surrounding areas. Noise is generally localized because it reduces in magnitude as distance away from the source increases. Only projects within close proximity or those that produce ambient growth could potentially result in cumulative noise

impacts. As shown in Section 3.13 - Noise, the Project will have a less than significant impact on noise.

Construction noise generated by the Project and future projects in the area would be temporary and would not add to the permanent noise environment or be considered as part of the cumulative context. Construction noise for future projects would be evaluated by the City on a project-by-project basis and each new development would be required to adhere to existing noise regulations and ordinances.

Operational (traffic) noise would occur as a result of increased traffic on local roadways due to the proposed Project. According to the City's General Plan EIR, the major noise sources in Tehachapi are related to roadways and vehicle traffic. The General Plan designates noise contours around areas of the City where noise generally exceeds 60 CNEL (Community Noise Equivalent Level). In the Project area, the roadway generating the most noise is Valley Boulevard.

As identified in Section 3.13, the Project itself will have a less than significant impact on noise. According to the City's General Plan EIR, a doubling of sound energy results in a 3 dB(A) increase in sound, which means that a doubling of sound wave energy (e.g., doubling the volume of traffic on a roadway) would result in a barely perceptible change in sound level¹. Because the Project does not result in a doubling of traffic on the surrounding roadways (See Table 3.17-12 in Section 3.17 – Transportation/Traffic, which shows peak hour Project trips at full buildout compared to existing and projected future traffic trips), it is not anticipated that the Project will result in an increase of 5 dB(A) or greater.

Future projects were considered as part of the cumulative analysis, with particular regard to cumulative traffic/vehicle noise. However, as new projects are proposed, the City will evaluate noise impacts on a project-by-project basis. Any future projects would be required to mitigate their noise impacts.

The project's cumulative impacts on noise are thus considered less than cumulatively considerable.

¹ Tehachapi General Plan EIR, page 4.10-1.

4.7 Population/Housing (Section 3.14)

The geographic area for cumulative Population/Housing analysis is the land area covered by the City's General Plan (including areas outside the City limits but within the Sphere of Influence). As discussed in Section 3.14 Public Services, the Project will have a less than significant impact on population and housing. Based on the City's General Plan, infrastructure master planning documents, and the City's Housing Element, it is determined that the proposed Project will not induce unplanned population growth beyond that which has been planned for and can be accommodated by the City.

As development occurs in within the General Plan area, the City will review projects on a case-by-case basis to determine potential future impacts to population and housing. Compliance with the City's General Plan policies and procedures will ensure that future developments do not exceed the City's ability to serve future population and housing. As such, cumulative impacts to population and housing would be less than cumulatively considerable.

4.8 Public Services (Section 3.15)

The geographic area for cumulative Public Services analysis is the land area covered by the City's General Plan (including areas outside the City limits but within the Sphere of Influence).

As discussed in Section 3.15 Public Services, the Project will have a less than significant impact on public services (police, fire, schools, public facilities). The Project is required to mitigate its impacts to these services by payment of fees or equivalent in-lieu as determined by the City. As future development occurs in within the General Plan area, the City will review projects on a case-by-case basis to determine potential future impacts on public services. Compliance with the City's General Plan policies and procedures, as well as payment of public service mitigation fees (or in-lieu equivalent) will ensure that future developments do not exceed the City's ability to provide services. As such, cumulative impacts to public services would be less than cumulatively considerable.

4.9 Transportation/Traffic Impacts (Section 3.17)

The cumulative setting for transportation impacts is the roadway system on and around the Project site, including any roadways or intersections that may be impacted by the Project. A cumulative conditions analysis was performed to identify potential impacts in year 2040. It was determined that the proposed Project would create new impacts on circulation conditions on the

local and regional traffic and transportation network. Such increase was considered, and analyzed in the Project Traffic Study (Appendix F) and in Section 3.17 Transportation.

The analyses for the cumulative (Year 2040) with-Project conditions consider the effects of traffic expected to be generated by full buildout of the Project with pending projects in the study area as well as projected development through the Year 2040. Table 7.1 of Appendix E presents a summary of the pending projects that were included in the analysis. Table 7.2 of Appendix E presents a summary of the trip generation estimates for the cumulative conditions that are expected to impact the study intersections.

The cumulative year 2040 analyses not only include trips expected to be generated by the pending projects, but also incorporate recommended year 2040 mitigation measures obtained from the Traffic Impact Analysis Report for the Red Apple Pavilion dated March 28, 2017. The additional improvements assumed in the analyses include the following:

- Tehachapi Boulevard / Tucker Road: a second eastbound left-turn lane, a second westbound left-turn lane, a southbound right-turn overlap phase while preventing U turns from the eastbound approach, and a northbound right-turn overlap phase while preventing U turns from the westbound approach. This improvement is included in the Tehachapi Region Transportation Impact Fee Program.
- Valley Boulevard / Tucker Road: a second left-turn lane on the eastbound, westbound and southbound approaches, a dedicated right-turn lane on the southbound approach, a southbound right-turn overlap phase while preventing U turns from the eastbound approach, and a westbound right-turn overlap phase while preventing U turns from the southbound approach.
- Tehachapi Boulevard / Mountain View Avenue: re-stripe to a two-way left-turn lane on Tehachapi Boulevard to accept left turns from the northbound movement. It should be noted that the Red Apple Pavilion traffic impact analysis report also included a recommendation to allow left turns from two different northbound lanes; this

recommendation was not incorporated because there is only one westbound receiving lane, and it is not typical to allow dual lefts in a stop-controlled intersection.

- Tehachapi Boulevard / Green Street: install a traffic signal with two-phase operations. This improvement is included in the Tehachapi Region Transportation Impact Fee Program.

As shown in Section 3.17, the combination of the pending and approved projects, regional growth, and the Project is likely to cause significant cumulative traffic impacts at the following locations:

- Tehachapi Boulevard / Mountain View Avenue: the cumulative projects will cause the LOS to drop from C to D during the a.m. peak hour and from C to F during the p.m. peak hour. The Project is expected to generate a negligible number of trips at this intersection. Therefore, a significant impact will not be identified as the Project does not contribute to the impact.
- Tehachapi Boulevard / Curry Street: the cumulative projects will cause the LOS to drop from B to D during the p.m. peak hour.
- Tehachapi Boulevard / Snyder Road: the cumulative projects will cause the LOS to drop from C to E during the a.m. peak hour.
- Valley Boulevard / Tucker Road: the cumulative projects will cause the LOS to drop from C to D during the p.m. peak hour.
- Valley Boulevard / Snyder Road: the cumulative projects will cause the LOS to drop from C to F during the a.m. peak hour.
- Valley Boulevard / Dennison Road: the cumulative projects will cause the LOS to drop from D to F during the a.m. peak hour.
- Highline Road / Curry Street: the cumulative projects will cause the LOS to drop from D to F during the a.m. peak hour and from B to E during the p.m. peak hour.
- Highline Road / Dennison Road: the cumulative projects will cause the LOS to drop from D to F during the a.m. peak hour.

The design of the planned traffic signals at the intersection of Tehachapi Boulevard and Green Street should consider the possible need for a pre-signal given the distance between Tehachapi Boulevard and the at-grade rail crossing.

The queueing conditions at signalized intersections in the year 2040 with-Project scenario are expected to be similar to the 2040 no-Project conditions. The analyses indicate that calculated 95th-percentile queues at signalized intersections exceed the existing storage capacity at the

locations described below. It should be noted that improvements that are expected to be constructed at the intersections prior to 2040 should be designed to accommodate the anticipated year 2040 queues.

- Tehachapi Boulevard / Tucker Road: the left-turn lanes on the eastbound approach during the a.m. peak hour and the right-turn lane on the southbound approach during the p.m. peak hour. The queues are unlikely to substantially affect traffic signal operations because the left-turn queue is within the length of the bay taper and there is additional space for vehicles to pass; the right-turn queue operates on the same phase as the through movement.
- Valley Boulevard / Curry Street: the left-turn lanes on the eastbound, westbound, and northbound approaches. The calculated 95th-percentile queues in the left-turn lanes on the eastbound and northbound approaches are long enough to potentially block the through movements. Since the width of the roadways on these approaches is limited, adjustment of traffic signal timing based on field observations would be recommended as a first option. If necessary, modification of the traffic signal phasing, with consideration given to protected-permissive phasing, may be required.

The City will require various roadway improvements and payment of traffic impact fees as described in Section 3.17 to mitigate project-related cumulative impacts (TRA-1 and TRA-2). Ultimately, the improvements outlined in the mitigation measures will ensure that Project-related traffic impacts will be less than significant.

Future projects were considered as part of the cumulative analysis, however, as new projects are proposed, the City will evaluate traffic impacts on a project-by-project basis. Any future projects would be required to mitigate their cumulative impacts as well. Implementation of the proposed mitigation measures will ensure that impacts to transportation / traffic are less than cumulatively considerable.

4.10 Utilities (Section 3.19)

Buildout of the City's General Plan and other pending projects in the Tehachapi area will contribute to changes to the City's wastewater treatment system, water utilities and solid waste disposal systems. See Section 4.8 for the discussion about cumulative impacts to water supply. The geographic area for cumulative utility analysis is the land area included in the City's General

Plan. As discussed in Section 3.19 Utilities, the Project will not result in significant impacts related to this impact area.

As with the proposed Project, for future projects, the City collects development impact fees to help cover the cost of wastewater (sewer), water, and solid waste infrastructure and facilities. In addition, revenue from sales tax from future projects assists in maintaining these services. The City evaluates impact fees from new development on a project-by-project basis. Continued implementation of development impact fees will ensure that cumulative impacts are less than significant for utilities.

Chapter 5

PROJECT ALTERNATIVES

PROJECT ALTERNATIVES

5.1 Introduction

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed project that could feasibly attain most of the objectives of the proposed project. The Guidelines further require that the discussion focus on alternatives capable of eliminating significant adverse impacts of the project or reducing them to a less-than significant level, even if the alternative would not fully attain the project objectives or would be more costly. According to CEQA Guidelines, the range of alternatives required in an EIR is governed by the “rule of reason” that requires an EIR to evaluate only those alternatives necessary to permit a reasoned choice. An EIR need not consider alternatives that have effects that cannot be reasonably ascertained and/or are remote and speculative.

The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

CEQA Guidelines §15126.6(e) identifies the requirements for the “No Project” alternative. The specific alternative of “no project” shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125).

Alternative locations can also be evaluated if there are feasible locations available. Each alternative is evaluated against the Project objectives and criteria established by the Lead Agency.

5.2 Project Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the City of Tehachapi's Project objectives:

- To provide a variety of housing opportunities with a range of densities, styles, sizes and values that will be designed to satisfy existing and future demand for quality housing in the area.
- To provide a sense of community and walkability within the development through the use of street patterns, parks/open space areas, landscaping and other project amenities.
- To provide a residential development that is compatible with surrounding land uses and is near major services.
- To provide a residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

5.3 Alternatives Considered in this EIR

- No Project (site remains vacant and unoccupied)
- Alternate Location
- Reduced (50%) Project

No Project Alternative

CEQA Section 15126.6(e) requires the discussion of the No Project Alternative "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." The No Project scenario in this case consists of retaining the property in its original configuration, with no construction or operation of the proposed Sage Ranch residential development. Under this alternative, the site remains vacant and no new development would occur on the site.

Description

This alternative would avoid both the adverse and beneficial effects of the project. This alternative would avoid site-disturbance and construction-related impacts associated with construction of the proposed Project. The No Project Alternative would avoid the generation of any environmental impacts.

Environmental Considerations

Continuation of the site as vacant and unoccupied would result in all environmental impacts being less than the proposed Project. There would be no changes to any of the existing conditions and there would be no impact to each of the 20 CEQA Checklist evaluation topics. The No-Project Alternative by definition would not meet the objectives of the proposed Project that were discussed earlier in this chapter.

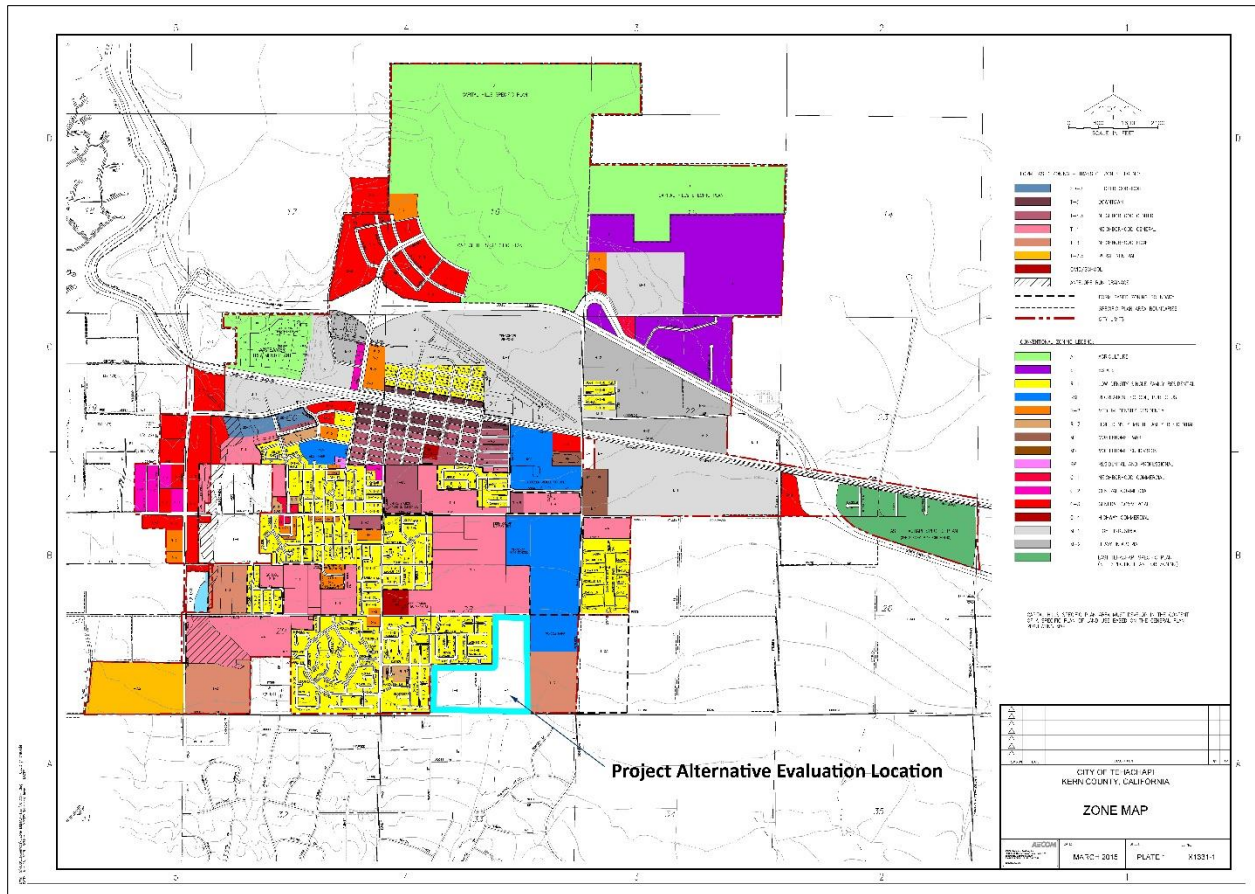
Alternate Location

The environmental considerations associated with an alternative site would be highly dependent on several variables, including physical site conditions, surrounding land use, site access, and suitability of the local roadway network. Physical site conditions include land, air, water, minerals, flora, fauna, noise, or objectives of historic or aesthetic significance, and would affect the nature and degree of direct impacts, needed environmental control systems, mitigation, and permitting requirements. Surrounding land use and the presence of sensitive receptors would influence neighborhood compatibility issues such as air pollutant emissions and health risk, odor, noise, and traffic. Site access and ability of the local roadway network to accommodate increased traffic without excessive and costly off site mitigation would be an important project feasibility issue.

The constraint on alternative site selection is the lessening or elimination of significant project impacts. The economic viability of the proposed project is dependent on ability to effectively develop a residential housing project in the Tehachapi area. To maintain most of the project objectives, any potentially feasible alternative site needs to be of adequate size and in a location that is accessible and serviceable (utilities) by the City of Tehachapi.

Description

There are relatively few sites within the City of Tehachapi that provide adequately sized lands suitable for the proposed Project. The criteria for selection included whether or not the alternate site would substantially reduce environmental impacts, availability of land, adequately sized parcels, efficiency of access, and acceptable land use designations/zoning. There is an approximately 120-acre area south of the Project site, north of Highline Road between Dennison Road and Curry Street. The area is outside the City limits but is rezoned T-4 (same as Project).



Perhaps the greatest obstacle in selecting an alternative site for the proposed Project is that the Project Applicant does not already own land here and/or does not have control of land at this location. However, for purposes of environmental evaluation, a description of potential environmental impacts is provided below.

Environmental Considerations

Development of an alternate site could theoretically meet most of the Project objectives presented earlier in this chapter. However, construction and operation of an alternate site would not be as cost effective or operationally efficient and thus is not consistent with the Project objectives. In addition, construction and operation at an alternate site would result in environmental impacts that are likely equal to or in some cases greater than the proposed project. The majority, if not all of project impacts are likely to occur at an alternate site. However, this alternative site is further away from Tehachapi High School and Jacobsen Middle School, which would reduce peak-hour traffic congestion at certain locations in comparison to the proposed Project. Although this may reduce peak-hour congestion at these locations, it could also result in increased air emissions from vehicles due to increased travel distances to the school.

This alternative site would require environmental review once the Applicant has prepared sufficient project description information. The time requirements for these activities would reduce the ability of the Applicant to accommodate projected residential demand in a timely manner compared to the proposed Project. This alternative would be the most complex, costly, and time-consuming alternative to implement. Various engineering and technical studies would then be completed to define the project and its components. Environmental review and obtaining entitlements would follow prior to construction activities. The site identified herein appears to have conditions that are not as favorable as the proposed Project site, such as less acreage, and as mentioned earlier, lack of control over the land.

Reduced (50%) Project

A reduction of 50% in the Project is a reasonable amount to illustrate what impact such an alternative would have on the significant effects of the proposed Project.

Description

This alternative would keep the same acreage, but would reduce the number of units from 1,000 to 500. All other project components, including overall acreage would remain (parks, etc.).

Environmental Considerations

Most of the environmental issues associated with this alternative would be similar to those of the proposed Project. However, this alternative does likely reduce impacts to the following areas:

- **Air Quality:** According to the Air Quality Impact Analysis and Greenhouse Gas Study (See Appendix B of this document) prepared for the Project, the proposed Project will have annual air pollutant emission rates which are less than the applicable Eastern Kern Air Pollution Control District thresholds of significance. Even though the proposed project is below existing thresholds of significance, this alternative would have lower annual emission rates than the proposed project for the following criteria pollutants: CO, NO_x, VOC, Sox, PM₁₀ and PM_{2.5}. Air pollutant emission rates associated with this alternative are thus lower than the proposed project.
- **Hydrology:** According to Section 3.10, the Project will be required to mitigate its impacts on potable water use. However, the impact was determined to be less than significant. Even though the proposed Project is below existing thresholds (with mitigation), a reduced project would decrease potable water impacts generated by the Project. Therefore, hydrologic impacts are lower than the proposed Project.

- **Noise:** According to Section 3.13, the Project will cause increased ambient noise levels along the roadways associated with the increase of Project-related vehicles. However, this increase is not considered significant. Even though the proposed Project is below existing thresholds, a reduced project would decrease noise impacts generated by the Project. Therefore, noise impacts are lower than the proposed Project.
- **Public Services:** As described in Section 3.15, the Project will result in the need for additional police and fire staff to cover the potential increase in public safety calls associated with the Project. A reduced project is likely to result in less public safety calls because of the reduced number of residential units and a reduced population. Thus, Public Service impacts are less than the proposed Project.
- **Traffic:** According to the Traffic Study prepared for the Project (Appendix F), the Project will generate traffic impacts that could potentially cause significant impacts, which require mitigation. It is likely that a reduced project would result in less mitigation being required than the proposed Project. Thus, traffic impacts are lower than the proposed Project.

Economic Considerations

Economics are not generally included in CEQA analysis unless a project results in blight to other areas of the City. However, in this instance, one of the Project objectives is to provide an economically viable residential project that provides a variety of housing options within the City's growing population base. A reduced project size is likely to make the project infeasible because it would not meet the City's goal of having diverse housing. A lower density project would likely result in a single-family neighborhood, which does not provide a variety of housing types and would not be consistent with the City's General Plan which expressly requires projects of this size to contain a diversity of housing types.

5.4 Summary of Potential Impacts of Alternatives

Table 5-1 is a generalized comparative assessment of potential impacts of the alternatives.

Table 5-1
Alternatives Potential Impact Analysis

Environmental Issues	No Project	Alternate Site	Reduced (50%) Project
Aesthetics	Less	Similar	Similar
Agriculture / Forest Resources	N/A	N/A	N/A
Air Quality	Less	Similar	Less
Biological Resources	Less	Similar	Similar
Cultural Resources	Less	Similar	Similar
Geology and Soils	Less	Similar	Similar
Greenhouse Gas Emissions	Less	Similar	Less
Hazards and Hazardous Materials	Less	Similar	Similar
Hydrology and Water Quality	Less	Similar	Less
Land Use / Planning	Less	Similar	Less
Noise	Less	Less	Less
Population / Housing	Less	Similar	Less
Public Services	Less	Similar	Less
Recreation	Less	Similar	Less
Transportation and Traffic	Less	Less	Less
Tribal Cultural Resources	Less	Similar	Similar
Utilities and Service Systems	Less	Similar	Less
Cumulative Impacts	Less	Similar	Less
Impact Reduction	Yes	Yes	Yes

Environmentally Superior Alternative

Based on a review of the alternatives evaluated in this chapter, the No Project Alternative would result in the fewest impacts on the environment. However, the No Project Alternative would not meet the City's objectives, as identified in this chapter.

Apart from the No Project Alternative, the Alternative Reduced (50%) Project would be the Environmentally Superior alternative because it would result in less adverse physical impacts to the environment with regard to air, water, noise, public services, population/housing, utilities and traffic. However, the Reduced (50%) Project does not meet all of the Project objectives, particularly with regard diversity of housing.

Summary and Determination

Only the No Project and Reduced Project Alternatives could potentially result in fewer impacts than the proposed Project's impacts. These Alternatives however, would not meet the objectives of the proposed Project. After this full, substantial, and deliberate analysis, the proposed Project remains the preferred alternative.

Chapter 6

CEQA Considerations

CEQA CONSIDERATIONS

6.1 Growth-Inducing Impacts

CEQA Section 15126 (d) requires that any growth-inducing aspect of a project be addressed in an EIR. This discussion includes consideration of ways in which the proposed Project could directly or indirectly foster economic or population growth with the construction and operation of the proposed Project in the surrounding area. Projects which could remove obstacles to population growth (such as a major public service expansion) are also considered in this discussion. The proposed Project is the establishment of a residential development that is being proposed in response to the demand for housing in the area. The Project is consistent with the City of Tehachapi's General Plan and will connect to all existing City utility services. The proposed Project would create a relatively minor amount of new (temporary) employment opportunities during construction; however, those positions would likely be readily filled by the existing employment base. There are no other aspects of the Project (such as creation of oversized utility lines, zone changes, etc.) that would induce further growth in the area. The proposed Project would not result in significant growth-inducing impacts.

Conclusion: The project would have *less-than-significant* growth-inducing impacts.

6.2 Irreversible Environmental Changes

Section 15126(f) of the CEQA Guidelines requires that an EIR include a discussion of significant irreversible environmental changes that would result from project implementation. CEQA Section 15126.2(c) identifies irreversible environmental changes as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents.

Irreversible changes associated with the project include the use of nonrenewable resources during construction, including concrete, plastic, and petroleum products. During the operational phase of the proposed Project, energy would be used for lighting, heating, cooling, and other requirements. The use of these resources would not be substantial and would not constitute a significant effect.

Conclusion: The project would have *less-than-significant* irreversible environmental changes.

Chapter 7

PREPARERS

PREPARERS

7.1 List of Preparers

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- Emily Bowen, LEED AP, Principal Environmental Planner

Peters Engineering (Traffic Study)

Insight Environmental Consultants (Air Quality Study)

Colibri Ecological Consulting (Biological Survey/Report)

7.2 Persons and Agencies Consulted

City of Tehachapi

- Jay Schlosser, Development Services Director
- Trevor Hawkes, City Planner

Appendices
