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State Clearinghouse No. 2019080497

JACKSON RANCH SPECIFIC PLAN

Kings County

Volume I

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PLACEWORKS

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ABBREVIATIONS AND ACRONYMS

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

Abbreviations and Acronyms

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

Abbreviations and Acronyms

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

Abbreviations and Acronyms

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

1. Executive Summary

1.1 INTRODUCTION

This draft environmental impact report (DEIR; State Clearinghouse No. 2019080497) addresses the environmental effects associated with the implementation of the proposed Jackson Ranch Specific Plan (Jackson Ranch or Specific Plan). The California Environmental Quality Act (CEQA) requires that local government agencies consider the environmental consequences before taking action on projects over which they have discretionary approval authority. An environmental impact report (EIR) analyzes potential environmental consequences in order to inform the public and support informed decisions by local and state governmental agency decision makers. An EIR does not recommend either approval or denial of a project; rather it is intended to provide a source of independent and impartial analysis of the foreseeable environmental impacts of a proposed course of action. This DEIR focuses on impacts determined to be potentially significant in the Initial Study completed for Specific Plan (Appendix A).

This DEIR has been prepared pursuant to the requirements of CEQA and Kings County's Local Guidelines for the Implementation of CEQA (pursuant to Kings County Board of Supervisors Resolution No. 16-001, adopted on January 5, 2016). Kings County, as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on Kings County's technical personnel from other departments and review of all technical subconsultant reports.

Data for this DEIR derives from onsite field observations; discussions with affected agencies; analysis of adopted plans, policies and programs; review of available studies, reports, data and similar literature; and specialized environmental assessments (air quality, biological resources, cultural and paleontological resources, greenhouse gas emissions, transportation, tribal cultural resources, and water supply).

1.2 ENVIRONMENTAL PROCEDURES

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

1. Disclose to decision makers and the public the significant environmental effects of proposed activities.
2. Identify ways to avoid or reduce environmental damage.
3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
4. Disclose to the public reasons for agency approval of projects with significant environmental effects.

5. Foster interagency coordination in the review of projects.

6. Enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the environmental consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

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

1.2.1 EIR Format

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

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

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

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

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

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

Chapter 7. Alternatives to the Proposed Project. Describes the alternatives and compares their impacts to the impacts of the proposed project. Alternatives include the No Project/No Development Alternative, No Project/Existing General Plan Alternative, and the Reduced Intensity Alternative.

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

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

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

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

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

Chapter 13. Bibliography. The technical reports and other sources used to prepare this DEIR.

Appendices: The appendices for this document comprise these supporting documents:

- Appendix A: Initial Study/Notice of Preparation (NOP)
- Appendix B: NOP Comment Letters
- Appendix C: Air Quality and GHG Background and Modeling Data
- Appendix D: Biological Technical Report
- Appendix E: Paleontological Resources Results
- Appendix F: Service Provider Questionnaire Responses
- Appendix G1: Traffic Impact Analysis Report
- Appendix G2: VMT Analysis Memorandum
- Appendix H: Water Supply Assessment

1.3 PROJECT LOCATION

The development area covered by the Jackson Ranch Specific Plan (Plan Area) is in an unincorporated agricultural area of the County, consisting of approximately 415 acres adjacent to and west of Interstate 5 (I-5) at the Utica Avenue on-ramp. The Plan Area is approximately 70 miles northwest of the City of Bakersfield and 70 miles southwest of the City of Fresno. The nearest urbanized area to the Plan Area is Kettleman City, an unincorporated community of the County approximately 6 miles to the northwest.

Utica Avenue forms the northern Plan Area boundary, the southbound I-5 on-ramp forms the northeastern boundary, and I-5 forms the eastern boundary. A portion of the western Plan Area boundary abuts the California Aqueduct, and 25th Avenue bisects it from north to south. Agricultural uses are located along the northern, western, and southern edges.

1.4 PROJECT SUMMARY

The Specific Plan is intended to shape development within the Plan Area through 2040 in accordance with the vision and guiding principles of the Specific Plan. The Specific Plan provides for three primary land use designations, and one overlay designation: Innovation Center (IC-JR), Commercial Thoroughfare (CT-JR), Specialty Agriculture (A-JR), and Specialty Agriculture with Air Strip Overlay (A-JR).

Under the Specific Plan, just under 2.4 million square feet of commercial space is planned for Jackson Ranch, with the majority of it slated for the area designated as Innovation Center. This designation allows for a range of uses including light industrial, research and development, medical offices, hospitals, office, hospitality, retail, and entertainment. The area encompassing the Commercial Thoroughfare land use designation is envisioned as a sophisticated transportation plaza, delivering food, lodging, amenities, and entertainment to both professional and leisure travelers along I-5. The Specific Plan intends to create a fully amenitized rest stop and commercial hub along I-5 that would serve travelers, encourage new employment across a variety of industries and attract a range of complementary commercial uses.

In order to implement the Specific Plan, a General Plan Amendment to change the General Plan land use designation of the Plan Area from General Agriculture-40 Acre (current General Plan land use designation) to Jackson Ranch Specific Plan is required. Under the Specific Plan, approximately 141 acres, or 34 percent of the Plan Area, would be designated as Innovation Center and Commercial Thoroughfare, which would allow a range of commercial, retail, light industrial, research and development, office, and hospitality uses. Also, approximately 268 acres, or 65 percent of the Plan Area, would be designated as Specialty Agriculture. It is anticipated that existing active agriculture will continue in the Specialty Agriculture-designated areas of the Plan Area during and after the development of Jackson Ranch.

Additionally, implementation of the Specific Plan would require an amendment to the Kings County Development Code and Zoning District Map. Specifically, the Development Code Amendment is needed to add the Jackson Ranch Specific Plan by reference and the Zoning District Map Amendment is needed to change the zoning district from AG-40 to Jackson Ranch Specific Plan. The existing zoning district of the Plan Area would also be replaced with the new Specific Plan land use designations. Additionally, the Development Code Amendment would state that the regulating code contained in the Specific Plan would serve as the regulatory plan (zoning, development, and design standards and guidelines) for all development projects and improvements in the Plan Area.

The Specific Plan would be adopted by the Kings County Board of Supervisors as ordinance and function as the regulatory plan that serves as the implementing zoning for the Plan Area, thereby, ensuring the orderly and systematic implementation of the Kings County General Plan, as well as the orderly and systematic

development of the Plan Area. The Specific Plan would act as a bridge between the Kings County General Plan and development that would occur throughout the Plan Area.

1.5 SUMMARY OF PROJECT ALTERNATIVES

The CEQA Guidelines (Section 15126.6[a]) state that an EIR must address "a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." The alternatives to the Specific Plan were based, in part, on their potential ability to reduce or eliminate the impacts determined to be significant and unavoidable for the Specific Plan. The following alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the Specific Plan but which may avoid or substantially lessen any of the significant effects of the project. These alternatives are analyzed in detail in Chapter 7, *Alternatives to the Proposed Project*.

- No Project/No Development Alternative
- No Project/Existing General Plan Alternative
- Reduced Intensity Alternative

An EIR must identify an "environmentally superior" alternative, and where the "No Project" Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the proposed project and determined to be environmentally superior, neutral, or inferior. However, only impacts found significant and unavoidable are used in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. Impacts involving air quality, greenhouse gas emissions, and transportation were found to be significant and unavoidable, as disclosed in Chapter 6, *Significant Unavoidable Adverse Impacts*. Chapter 7 identifies the environmentally superior alternative.

1.5.1 No Project/No Development Alternative

Section 15126.6(e) of the CEQA Guidelines requires analysis of the No Project Alternative. In accordance with the CEQA Guidelines, the No Project/No Development Alternative for a development project on an identifiable property consists of the circumstance under which the project does not proceed as provided by Section 15126.6(e)(3)(B) of the CEQA Guidelines. Section 15126.6(e)(3)(B) provides that, "In certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained." Under this alternative, the Specific Plan would not be implemented and no new development would occur, however, the existing conditions would remain in operation.

This No Project/No Development Alternative assumes the Specific Plan would not be implemented and no new development would occur. The existing agricultural uses and operations of the Plan Area would remain under this alternative, and no offsite infrastructure improvements would be implemented. None of the impacts of the Specific Plan, adverse or beneficial, would result. Accordingly, the No Project/No

Development Alternative provides a comparison between the environmental impacts of the Specific Plan as compared to the environmental conditions, resulting from not approving or denying the Specific Plan.

1.5.2 No Project/Existing General Plan Alternative

Under the No Project/Existing General Plan Alternative, the current general plan land uses and zoning district of the Plan Area (General Agriculture-40 Acre and General Agriculture-40 [AG-40] District, respectively) would remain in effect. Development in accordance with the existing general plan and zoning would occur in the Plan Area. The General Agriculture-40 Acre land use designation applies to rural areas of the County and allows intensive agricultural uses that, by their nature, may be incompatible with urban uses. The General Agriculture-40 District is intended primarily for application to rural areas of the County, which are generally characterized by extensive and intensive agricultural uses of land.

Under this alternative, the existing agricultural uses and operations, or more intensive agricultural uses (e.g., field crops that unlike fruit trees, require more intense and frequent disturbance of soils and use of heavy farm equipment; agricultural produce processing, packing, and shipping facilities; animal keeping and sales; dairy farms), would occur in the Plan Area. The exact type and quantity of agricultural uses and operations that could in the Plan Area could range from the existing agricultural uses and operations remaining or development of a more intensive agricultural use. For this analysis it is assumed that the existing agricultural uses and operations would remain, as determining the impacts of a more intensive agricultural use would be hypothetical and difficult to analyze, since the range is so wide. For example, the environmental impacts of developing filed crops over a dairy farm are very different, with one use having greater impacts than the other.

1.5.3 Reduced Intensity Alternative

Under the Reduced Intensity Alternative, only Phase One of the Specific Plan—which consists of buildout of the portion of the Plan Area designated as Commercial Thoroughfare—would be developed. This alternative would accommodate up to 161,125 square feet of travel-related commercial space on approximately 27 acres of the overall 415-acre Plan Area and would generate approximately 470 employees. Phase Two, which would accommodate up to 2,230,708 square feet, would not be developed. The development impact area under this alternative would also be reduced compared to the Specific Plan—27 acres versus 141 acres, respectively.

Proposed commercial uses in the 27 acres of this alternative include a 10-acre truck stop, potentially offering a restaurant, service station, and short term resting place for large transport vehicles. The existing agricultural uses and operations of the remaining acreage of the Plan Area would continue under this alternative. Additionally, as with the Specific Plan, this alternative would require construction of the offsite water pipeline, roadway improvements along Utica Avenue and 25th Avenue, and wastewater treatment facility.

1.6 ISSUES TO BE RESOLVED

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

1. Whether this DEIR adequately describes the environmental impacts of the project.
2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether the proposed land use changes are compatible with the character of the existing area.
4. Whether the identified goals, policies, or mitigation measures should be adopted or modified.
5. Whether there are other mitigation measures that should be applied to the project besides the Mitigation Measures identified in the DEIR.
6. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

1.7 AREAS OF CONTROVERSY

Prior to the preparation of the DEIR, Kings County circulated a Notice of Preparation (NOP) and Initial Study on August 29, 2019 (Appendix A). Comments received during the Initial Study's public review period, from August 29, 2019 to September 29, 2019, are in Appendix B. In addition, a public scoping meeting was held during the 30-day public review period, on September 18, 2019, at 7:00 p.m. in the Board of Supervisors Chambers, in the Administrative Building No. 1, Kings County Government Center, 1400 W. Lacey Blvd., Hanford, California. No agencies or members of the public attended the public scoping meeting. A summary of comments received on the NOP are provided in Table 2-1, *NOP Written Comments Summary*; all NOP comments received during the public review period are in Appendix B. The table provides references to the sections of the DEIR in which these issues are evaluated. No other areas of controversy are known to the lead agency.

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

Table 1-1 summarizes the conclusions of the environmental analysis contained in this DEIR. Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance after imposition of the mitigation measures is also presented.

1. Executive Summary

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 AGRICULTURE AND FORESTRY RESOURCES			
Impact 5.1-1. Implementation of the Specific Plan would convert mapped important farmland to non-agricultural uses.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
5.2 AIR QUALITY			
Impact 5.2-1. Construction activities associated with the Specific Plan would result in emissions that exceed the SJVAPCD's significant criteria and would cumulatively contribute to the nonattainment designation and health impact in the SJVAB.	Potentially significant	**Specific Plan – Plan Area Buildout** AQ-1 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall require their construction contractors to use equipment that meets the United States Environmental Protection Agency's (US EPA) Tier 4 Final emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower, unless it can be demonstrated to the Kings County that such equipment is not available. Where equipment is not available, the next available engine Tier (e.g., US EPA Tier 4 Interim equipment) shall be used. Any emissions-control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 4 emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations. Prior to construction, the project engineer shall ensure that all construction (e.g., demolition and grading) plans clearly show the requirement for EPA Tier 4 emissions standards for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the Kings County Community Development Agency. The construction equipment list shall state the makes, models, Equipment Identification Numbers, and number of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. The	Significant and unavoidable

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		reporting and maintenance records shall be available for inspection during construction and remain available for at least two years after completion of construction. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to 5 minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9. AQ-2 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall require their construction contractors to use low volatile organic compound (VOC) paints (i.e., paints with a VOC content of 50 grams per liter or less) for all interior and exterior coatings. This requirement shall be noted on all construction management plans verified by the Kings County prior to issuance of any construction permits and during interior coating activities and verified by the Kings County Community Development Agency during construction activities. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	
Impact 5.2-2. Long-term operation of the Specific Plan would result in emissions that exceed the SJVAPCD's significant criteria and would cumulatively contribute to the nonattainment designation and health impact in the SJVAB.	Potentially significant	**Specific Plan – Plan Area Buildout** *Off-Road Equipment* AQ-3 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall require that off-road equipment (e.g., yard trucks/hostlers and forklifts) utilized onsite for daily warehouse and business operations be non-diesel and powered by a clean energy source such as natural gas, electricity, hydrogen, etc. If the property is leased, then the property/facility owner shall disclose this requirement to all tenants/business entities and the requirement shall be included in any lease agreement .	Significant and unavoidable

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		AQ-4 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall design all truck/dock bays that serve cold storage facilities within the proposed buildings to be electrified to facilitate plug-in capability and support use of electric standby and/or hybrid electric transport refrigeration units. All site and architectural plans submitted to the Kings County Community Development Agency shall note all the truck/dock bays designated for electrification. AQ-5 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall require electric standby and/or hybrid electric transport refrigeration units (E/S TRUs) be utilized onsite for daily warehouse and business operations for all tenants/business entities that own or would own their own fleet to be used as part of the business operations. Additionally, all E/S TRUs shall comply with the California Air Resources Board's "Alternative Technology" requirements under Section 2477(e)(1)(A)(3) of the California Code of Regulations, Title 13, Article 8, Chapter 9, Division 3. If the property is leased, then the property/facility owner shall disclose these requirements to all tenants/business entities and the requirements shall be included in any lease agreement. AQ-6 To reduce idling emissions from transport trucks, signage shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations (e.g., Rule 2485). At minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict non-essential idling to no more than five (5) consecutive minutes; and 3) telephone numbers of the building facilities manager and CARB to report violations. All signage shall be made of weather-proof materials. All site and architectural plans submitted to the Kings County (County) Community Development Agency shall note the locations of these signs. Prior to issuance of occupancy permits, the County shall verify the installation of these signs.	

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Transportation AQ-7 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall plan for the necessary infrastructure (e.g., conduit in parking lots) to support the future transition to zero emissions and near zero emission trucks. These requirements shall be noted on all site plans and verified by the Kings County Community Development Agency. **Specific Plan – Phase One Buildout** Mitigation Measures AQ-3-through AQ-7 also apply here. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	
Impact 5.2-3. Implementation of the Specific Plan would not expose sensitive receptors to substantial concentrations of air toxics.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
Impact 5.2-4. Installation of the Wastewater Treatment Facility within the Plan Area has the potential to create objectionable odors that could affect a substantial number of people.	Potentially significant	**Specific Plan – Plan Area Buildout** AQ-8 An odor management plan shall be prepared for the onsite Wastewater Treatment Facility that would be developed to serve the wastewater needs of the Jackson Ranch Specific Plan. The odor management plan shall outline steps to comply with the San Joaquin Valley Unified Air Pollution Control District Rule 4102 for nuisance odors. The odor management plan shall identify the best available control technologies for toxics (T-BACTs) that will be utilized to reduce potential odors to acceptable levels, including appropriate enforcement mechanisms. T-BACTs may include, but are not limited to scrubbers (i.e., air pollution control devices) at the industrial facility. T-BACTs identified in the odor management plan shall be incorporated into the site plan. The odor management plan shall be submitted to the Kings County Community Development Agency prior to the commencement of operations.	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Specific Plan – Phase One Buildout Mitigation Measures AQ-8 also applies here. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	
Impact 5.2-5. The Specific Plan has the potential to conflict with the SJVAPCD's air quality management plans.	Potentially significant	**Specific Plan – Plan Area Buildout** Mitigation Measures AQ-1 through AQ-7 also apply here. **Specific Plan – Phase One Buildout** Mitigation Measures AQ-1 through AQ-7 also apply here. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Significant and unavoidable
5.3 BIOLOGICAL RESOURCES			
Impact 5.3-1. Implementation of the Specific Plan could impact special-status species.	Potentially significant	**Specific Plan – Plan Area Buildout** BIO-1 Prior to the commencement of any development activity within the development area covered by the Jackson Ranch Specific Plan (Plan Area), pre-construction surveys for burrowing owls shall be conducted by a qualified biologist to ensure potential impacts to burrowing owls resulting from project-related construction activities (including site preparation, clearing, and grubbing) are avoided and/or minimized to less-than-significant levels. The following measures shall be taken: • A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct preconstruction surveys of the permanent and temporary impact areas, plus a 150-meter (approximately 492-foot) buffer, to locate active breeding or wintering burrowing owl burrows no less than 14 days prior to construction. The survey methodology will be consistent with the methods outlined in the California Department of Fish and Wildlife (CDFW) staff report on Burrowing Owl Mitigation and will consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		burrowing. Copies of the survey results shall be submitted to the CDFW and Kings County Community Development Agency. • A qualified biologist shall conduct an additional preconstruction survey of all impact areas plus an approximately 492-foot buffer no more than 24-hours prior to start or restart (as the case may be) of ground-disturbing construction activities in order to identify any additional burrowing owls or burrows necessitating avoidance, minimization, or mitigation measures. • If burrowing owls are detected, no ground-disturbing activities, such as road construction or ancillary facilities construction, shall be permitted within the distances listed in the CDFW Staff Report on Burrowing Owl Mitigation, unless otherwise authorized by CDFW. Burrowing owls shall not be moved or excluded from burrows during the breeding season. • If any burrowing owl burrows are observed during the preconstruction survey, avoidance measures shall be consistent with those included in the CDFW Staff Report on Burrowing Owl Mitigation. If avoidance of active burrows is infeasible, the owls may, in consultation with CDFW, be passively displaced from their burrows according to recommendations made in the CDFW Staff Report on Burrowing Owl Mitigation.	
		BIO-2 Prior to the commencement of any development activity within the development area covered by the Jackson Ranch Specific Plan (Plan Area), preconstruction surveys for San Joaquin kit fox and American badger shall be conducted by a qualified biologist (i.e., a wildlife biologist with previous San Joaquin kit fox and American badger survey experience) to ensure potential impacts to San Joaquin kit fox and American badger resulting from project-related construction activities (including site preparation, clearing, and grubbing) are avoided and/or minimized to less-than-significant levels. The survey shall follow the USFWS's Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance. If any evidence of occupation of that portion of the Plan Area by the San Joaquin kit fox or American badger is observed, a buffer shall be established by a qualified biologist that results in sufficient avoidance to comply with applicable regulations. If sufficient avoidance cannot be established, the US Fish and Wildlife Services (USFWS) and California Department of Fish and Wildlife (CDFW) shall be contacted for further	

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		guidance and consultation on additional measures. The project proponent shall obtain any required permits from the appropriate wildlife agency. The following buffer distances shall be established prior the commencement of any development activity within the Plan Area: • San Joaquin kit fox or American badger potential den: 50 feet. • San Joaquin kit fox or American badger known den: 100 feet. • San Joaquin kit fox or American badger pupping den: contact USFWS and CDFW. BIO-3 Prior to and during construction activities of any development within the development area covered by the Jackson Ranch Specific Plan (Plan Area), the project applicant shall ensure that the proposed development complies with the following measures to avoid impacts to San Joaquin kit fox: • All pipes, culverts, or similar structures with a diameter of four inches or more that are stored within the Plan Area for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the US Fish and Wildlife Services (USFWS) has been consulted. If necessary, under the direct supervision of the qualified biologist, the pipe may be moved once to remove it from the path of construction activity until the fox has escaped. • If any San Joaquin kit fox dens are found during preconstruction surveys, the status of the dens shall be evaluated no more than 14 days prior to the proposed ground disturbance. Provided that no evidence of kit fox operation is observed, potential dens shall be marked, and a 50-foot avoidance buffer delineated using stakes and flagging or other similar material to prevent inadvertent damage to the potential den. If a potential den cannot be avoided, it may be hand-excavated following the USFWS's Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance by the qualified biologist. If kit fox activity is observed at the den, the den status shall change to "known" per USFWS Guidelines, and the buffer distance shall be increased to 100 feet. Absolutely no excavation of San Joaquin kit fix	

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		known, or pupping dens shall occur without prior authorization from USFWS and the California Department of Fish and Wildlife (CDFW). • During construction, to enable kit foxes that may occur onsite, the perimeter security fence shall leave a five-inch opening between the fence mesh and the ground or the fence shall be raised five inches above the ground. The bottom of the fence fabric shall be knuckled (wrapped back to form a smooth edge) to protect wildlife that passes under the fence. • To prevent inadvertent entrapment of San Joaquin kit foxes, badgers, or other animals during construction, all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or similar materials at the close of each working day or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes and trenches are filled, they shall be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. If listed species are trapped, the USFWS and CDFW shall be contacted. • Project-related vehicles shall observe a 15-mile-per-hour speed limit in all portion of the Plan Area, except County roads and federal and state highways. Construction after sundown shall be prohibited. Off-road traffic outside of designated project areas shall be prohibited. • All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from construction sites in the Plan Area. • No domestic pets shall be allowed in Plan Area, except for trained canine animals related to security and operation of the facility. • All uses of herbicidal and rodenticide compounds shall observe label and other restrictions mandated by the US Environmental Protection Agency, California Department of Food and Agriculture, and federal and state legislation as well as additional project-related restrictions deemed necessary by CDFW and/or the USFWS. • No plants or wildlife shall be collected, taken, or removed from the construction areas or areas of off-site improvements, except as necessary	

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		for project-related vegetation removal or wildlife relocation. Salvage of native vegetation to be removed from construction areas is encouraged but shall only be performed by a qualified biologist and with written approval from CDFW.	
		BIO-4 San Joaquin antelope squirrel may be present within the southern half of the development area covered by the Jackson Ranch Specific Plan (Plan Area), along the western border and within areas adjacent to the grassland habitat located along the aqueduct. Prior to development of the Plan Area land adjacent to the grassland habitat, focused surveys for San Joaquin antelope squirrel shall be conducted by a qualified biologist (i.e., a wildlife biologist with previous San Joaquin kit fox and American badger survey experience) according to the California Department of Fish and Wildlife (CDFW) Region 4 Approved Methodologies for Sensitive Species. Surveys for San Joaquin antelope squirrel shall be conducted using daytime line transects at 10- to 30-meter (30- to 100-foot) intervals so that the areas is covered in a systematic manner. While walking the transects, the qualified biologist shall scan the area (including using binoculars) looking for the species and listening for the species vocalizations. Transect surveys shall be conducted only when air temperatures are between 20˚ C to 30˚ C (68˚ F to 86˚ F). These parameters shall be checked before walking each transect. Visual and audible observations of San Joaquin antelope squirrel shall be recorded and mapped along with the location of suitable burrows. Representative burrows shall be photographed. Surveys for San Joaquin antelope squirrel shall coincide with their most active season, April 1 to September 30. Less active times of year are associated with low temperatures. Surveys conducted outside of these parameters, which confirm the presence of the species, will also be accepted. If San Joaquin antelope squirrels are determined to be present on or immediately adjacent to the Plan Area, the project applicant shall consult with CDFW to determine appropriate avoidance measures, which could include but is not limited to installing small mammal exclusion fencing, biological monitoring, and/or burrow excavation.	
		BIO-5 If construction or other project activities are scheduled to occur during the bird breeding season (February through August for raptors and March through	

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		August for the majority or migratory birds species), a pre-construction nesting bird survey shall be conducted by a qualified biologist to ensure that active bird nests, including those for the loggerhead shrike, will not be disturbed or destroyed. The survey shall be completed no more than 14 days prior to initial ground disturbance. The nesting bird survey shall include the development area covered by the Jackson Ranch Specific Plan (Plan Area) and adjacent areas where project activities have the potential to affect active nests, either directly or indirectly due to construction activity or noise. If an active nest is identified, a qualified biologist shall establish an appropriate disturbance limit buffer around the nest using flagging or staking. Construction activities shall not occur within any disturbance limit buffer zones until the nest is deemed inactive by the qualified biologist. **Specific Plan – Phase One Buildout** Mitigation Measures BIO1- through BIO-5 also apply here. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	
Impact 5.3-2. Implementation of the Specific Plan would not interfere with an established wildlife corridor; however, removal of vegetation onsite during site clearance could impact nesting migratory birds.	Potentially significant	**Specific Plan – Plan Area Buildout** Mitigation Measure BIO-5 also applies here. **Specific Plan – Phase One Buildout** Mitigation Measure BIO-5 also applies here. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
5.4 CULTURAL RESOURCES			
Impact 5.4-1. Implementation of the Specific Plan could result in an impact on unknown subsurface archaeological resources.	Potentially significant	**Specific Plan – Plan Area Buildout** CUL-1 Prior to any ground disturbance for any development phase of the Jackson Ranch Specific Plan, the project applicant/developer shall offer interested Native American Tribes (that is, Tribes with traditional territories in the project region) the opportunity to provide a Native American Monitor during	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		construction-related ground disturbing activities and have retained a qualified archaeologist in order to provide pre-construction cultural resources awareness training to all construction personnel. Tribal participation would be dependent on the availability and interest of a Tribe. Training shall consist of a description of potential pre-contact and historic-era archaeological discoveries associated with the region and education on appropriate protocol following the unanticipated discovery of any archaeological deposits during construction. Furthermore, a qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained in an on-call capacity to evaluate any unanticipated finds by construction crew or other project personnel. If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. The qualified archaeologist shall be called on to evaluate the significance of the find and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find: • If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required. • If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the Kings County Community Development Agency (County), and applicable landowner. The County shall consult on a finding of eligibility and implement appropriate treatment measures if the find is determined to be eligible for inclusion in the California Register of Historic Resources (CRHR). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not eligible for or CRHR; or 2) that the treatment measures have been completed to their satisfaction. • If the professional archeologist believes that a cultural resource encountered onsite is of Native American origin, the archaeologist shall notify representatives of Native American Tribes with traditional territories in the project region (e.g., Santa Rosa Tachi Yokut Tribe). If requested by the Native American tribe(s), the developer or archaeologist shall, in good	

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		faith, consult on the discovery and its disposition (e.g., avoidance, preservation, return of artifacts to tribe). If the resources are determined to be Native American in origin, a tribal monitor from the consulting tribe shall be present during the remaining site-grading activities. • Upon coordination with the County, any archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded long-term preservation. Documentation for the archeological work shall be provided in accordance with applicable cultural resource laws and guidelines. • If the find includes human remains, or remains that are potentially human, in coordination with the project applicant/construction contractor, the archeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Kings County Coroner (as per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 shall be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the Native American Heritage Commission (NAHC), who then will designate a Native American Most Likely Descendant (MLD) for the Specific Plan (§5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, NAHC may mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains onsite where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with NAHC or the appropriate information center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies (County and NAHC), through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.	

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Specific Plan – Phase One Buildout Mitigation Measure CUL-1 also applies here. **Specific Plan – Offsite Water Infrastructure Improvements** Mitigation Measure CUL-1 also applies here.	
5.5 GEOLOGY AND SOILS			
Impact 5.5-1. Implementation of the Specific Plan could result in a direct or indirect impact on unknown subsurface paleontological resources.	Potentially significant	**Specific Plan – Plan Area Buildout** GEO-1 Prior to any ground disturbance for any development phase of the Jackson Ranch Specific Plan, the project applicant/developer shall provide a letter to the Kings County Community Development Agency from a qualified paleontologist. The letter shall state that the project applicant/developer has retained such an individual, which shall be selected in consultation with the County, and that the consultant will be on call during all grading and other significant ground-disturbing activities. The paleontologist shall also provide pre-construction awareness training to all construction personnel. Training shall consist of a description of potential paleontological resource discoveries associated within the region and education on appropriate protocol following the unanticipated discovery of any paleontological resource which occurs during construction. In the event that potential paleontological resources are discovered during ground-disturbing activities, all such activity shall cease in the immediate area of the find, and the retained professional paleontologist shall be contacted immediately to examine the find. The paleontologist shall have the authority to halt any activities adversely impacting potentially significant paleontological resources until they can be formally evaluated. Suspension of ground disturbances in the vicinity of the discovery shall not be lifted until the paleontologist has evaluated the discovery. Work may continue in other areas of the project site and for other project elements while the encountered find is evaluated. If upon examination the resource is determined to be a significant paleontological resource, the qualified paleontologist shall make	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		recommendations on the treatment and disposition of the resource. The paleontologist shall prepare a final report describing all identified and curated resources (if any are found) and submit the report to the Kings County Community Development Agency. **Specific Plan – Phase One Buildout** Mitigation Measure GEO-1 also applies here. **Specific Plan – Offsite Water Infrastructure Improvements** Mitigation Measure GEO-1 also applies here.	
5.6 GREENHOUSE GAS EMISSIONS			
Impact 5.6-1. Operation of the Specific Plan would result in a substantial increase in GHG emissions.	Potentially significant	**Specific Plan – Plan Area Buildout** *Transportation Sector* GHG-1 Applicants for development projects within the area covered by the Jackson Ranch Specific Plan shall design the proposed surface parking lots to provide parking for low-emitting, fuel-efficient, and carpool/van vehicles. At minimum, the number of preferential parking spaces shall be equal to the Tier 2 Nonresidential Voluntary Measures of California's Green Building Standards Code Section A5.106.5.1.2. GHG-2 Applicants for development projects within the area covered by the Jackson Ranch Specific Plan shall design the proposed surface parking lots to provide electric vehicle (EV) charging stations. At minimum, the number of EV charging stations shall be equal to the Tier 2 Nonresidential Voluntary Measures of California's Green Building Standards Code Section A5.106.5.3.2. Mitigation Measures AQ-3 through AQ-7 also apply here. **Specific Plan – Phase One Buildout** Mitigation Measures GHG-1, GHG-2, and AQ-3 through AQ-7 also apply here.	Significant and unavoidable

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Specific Plan – Offsite Water Infrastructure Improvements No mitigation measures are required.	
Impact 5.6-2. Implementation of the Specific Plan would not conflict with applicable GHG reduction plans.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
5.7 HYDROLOGY AND WATER QUALITY			
Impact 5.7-1. Development pursuant to the Specific Plan could violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	Potentially significant	**Specific Plan – Plan Area Buildout** HYD-1 A drainage plan for development pursuant to any phase of the Jackson Ranch Specific Plan (Specific Plan) shall be prepared on a project-by-project basis that specifies how runoff on the proposed development site will be managed in order to protect water quality and capture and retain runoff. The drainage plan of each development project shall include detailed runoff calculations to appropriately size the master plan retention basin (basin) and other required drainage improvements (e.g., storm drain open channels, inlets, and pipes) to meet the statewide Construction General Permit (GCP) requirements of the development area covered by the Specific Plan (Plan Area). Changes in volume and design capacity may be required to the basins as development occurs pursuant to the phases of the Specific Plan. The detention basin shall be designed and constructed to prevent localized on- or offsite flooding and prevent any negative water quality effects. The basin shall also be designed to capture surface runoff and retain flows such that the rate and amount of surface runoff does not exceed existing flow rates and amounts, pursuant to the CGP. The drainage plan shall be designed in accordance with the Kings County Improvement Standards and shall be submitted to the Engineering Development Division of the Kings County Public Works Department prior to any ground disturbance for review and approval.	Less than significant

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Specific Plan – Phase One Buildout Mitigation Measure HYD-1 also applies here. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	
Impact 5.7-2. Development pursuant to the Specific Plan would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
Impact 5.7-3. Development pursuant to the Specific Plan would increase the amount of impervious surfaces in in the Plan Area, which in turn could substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion or siltation on- or off-site, potential flooding on- or offsite, runoff water that would exceed the capacity of storm drain systems, or substantial additional sources of polluted runoff.	Potentially significant	**Specific Plan – Plan Area Buildout** Mitigation Measure HYD-1 also applies here. **Specific Plan – Phase One Buildout** Mitigation Measure HYD-1 also applies here. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
Impact 5.7-4. Development pursuant to the Specific Plan could obstruct or conflict with the implementation of a water quality control plan but would not obstruct or conflict with the implementation of a sustainable groundwater management plan.	Potentially significant	**Specific Plan – Plan Area Buildout** Mitigation Measure HYD-1 also applies here. **Specific Plan – Phase One Buildout** Mitigation Measure HYD-1 also applies here. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.8 LAND USE AND PLANNING			
Impact 5.8-1. Implementation of the Specific Plan would not conflict with applicable plans adopted for the purpose of avoiding or mitigating an environmental effect.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
5.9 NOISE			
Impact 5.9-1. Construction activities of development projects accommodate by the Specific Plan would result in temporary construction noise increases in the vicinity of the Plan Area.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** **No mitigation measures are required.**	Less than significant
Impact 5.9-2. Implementation of the Specific Plan would result in long-term operation-related noise increases, but not an extent that would exceed local standards or impact sensitive uses.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.10 PUBLIC SERVICES			
FIRE PROTECTION AND EMERGENCY SERVICES			
Impact 5.10-1. Implementation of the Specific Plan would introduce new structures workers, and visitors into the Kings County Fire Department service boundaries, thereby increasing the requirement for fire protection and emergency services.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
POLICE PROTECTION			
Impact 5.10-2. Implementation of the Specific Plan would introduce new structures, workers, and visitors into the Kings County Sherriff's Office and California Highway Patrol service areas/boundaries, thereby increasing the requirement for police protection services.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
5.11 TRANSPORTATION			
Impact 5.11-1. Implementation of the Specific Plan would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Potentially Significant	**Specific Plan – Plan Area Buildout** TRAF-1 Prior to issuance of building permits for structures that would be accommodated by the Jackson Ranch Specific Plan under the Plan Area Buildout [2040] Traffic Conditions with the Specific Plan analyzed in the Traffic Impact Analysis Report dated March 2020 (incorporate herein as reference), the project applicant shall enter into an agreement with Caltrans, which outlines a schedule for installation of traffic improvements listed below, and make payment to Caltrans toward the construction of the traffic improvements:	Significant and unavoidable

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• Southbound I-5 at SR-41 Ramps (AM peak hour): Optimize the traffic signal timing (timing splits and cycle). • Utica Avenue at Southbound I-5 Ramp (AM peak hour): Convert the intersection from a two-way stop-controlled intersection to a roundabout. • Utica Avenue at Northbound I-5 Ramp (AM peak hour, PM peak hour, and Friday peak hour): Convert the intersection from a two-way stop-controlled intersection to a roundabout. **Specific Plan – Phase One Buildout** TRAF-2 Prior to issuance of building permits for structures that would be accommodated by the Jackson Ranch Specific Plan under the Phase One Buildout [2023] Traffic Conditions with the Specific Plan analyzed in the Traffic Impact Analysis Report dated March 2020 (incorporate herein as reference), the project applicant shall enter into an agreement with Caltrans, which outlines a schedule for installation of traffic improvements listed below, and make payment to Caltrans toward the construction of the traffic improvements: • Utica Avenue at Northbound I-5 Ramp (Friday peak hour): Convert the intersection from a two-way stop-controlled intersection to an all-way stop-controlled (stop signs) intersection. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	
Impact 5.11-2. Implementation of the Specific Plan would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.12 TRIBAL CULTURAL RESOURCES			
Impact 5.12.1. Implementation of the Specific Plan could result in an impact on unknown subsurface tribal cultural resources	Potentially significant	**Specific Plan – Plan Area Buildout** Mitigation Measure CUL-1 also applies here. **Specific Plan – Phase One Buildout** Mitigation Measure CUL-1 also applies here. **Specific Plan – Offsite Water Infrastructure Improvements** Mitigation Measure CUL-1 also applies here.	Less than significant
5.13 UTILITIES AND SERVICE SYSTEMS			
WASTEWATER TREATMENT AND COLLECTION SYSTEMS			
Impact 5.13-1. Development pursuant to the Specific Plan would result in the construction of new wastewater treatment facilities in the Plan Area; however, their construction and operation would not cause significant environmental effects.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
Impact 5.13-2. Wastewater generated from development pursuant to the Specific Plan would be privately treated onsite and not require treatment by a wastewater service provider.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
WATER SUPPLY AND DISTRIBUTION SYSTEMS			
Impact 5.13-3. Implementation of the Specific Plan would result in the construction of new potable water distribution facilities; however, their construction and operation would not cause significant environmental effects.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
Impact 5.13-4. Available water supplies are sufficient to serve development pursuant to the Specific Plan during normal, dry, and multiple dry years.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
STORM DRAIN SYSTEM			
Impact 5.13-5. Development pursuant to the Specific Plan would result in the construction of new drainage improvements and facilities; however, their construction and operation would no cause significant environmental effects.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
SOLID WASTE			
Impact 5.13-6. Existing solid waste facilities would be able to accommodate solid waste generated by development accommodated by the Specific Plan, and development would comply with solid waste regulations.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant
ELECTRIC POWER AND NATURAL GAS FACILITIES			
Impact 5.13-7. Existing and/or proposed utility facilities would be able to accommodate electricity and natural gas demands of development projects accommodated by the Specific Plan.	Less than significant	**Specific Plan – Plan Area Buildout** No mitigation measures are required. **Specific Plan – Phase One Buildout** No mitigation measures are required. **Specific Plan – Offsite Water Infrastructure Improvements** No mitigation measures are required.	Less than significant

2. Introduction

2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

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

The lead agency means "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment" (CEQA Guidelines § 15367 and Public Resources Code § 21067). Kings County has the principal responsibility for approval of the Jackson Ranch Specific Plan (Specific Plan). For this reason, Kings County is the CEQA lead agency for the Specific Plan.

The intent of the DEIR is to provide sufficient information on the potential environmental impacts of the Specific Plan to allow Kings County to make an informed decision regarding approval of the project. Specific discretionary and non-discretionary actions to be reviewed by Kings County are described in Section 3.4, *Intended Uses of the EIR*.

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

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

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

2.2 NOTICE OF PREPARATION AND INITIAL STUDY

Kings County determined that an EIR would be required for the Specific Plan and issued a Notice of Preparation (NOP) and Initial Study on August 29, 2019 (Appendix A). Comment letters received during the NOP's public review period, from August 29, 2019 to September 29, 2019, are provided in Appendix B. In addition, a public scoping meeting was held during the 30-day public review period, on September 18, 2019, at 7:00 p.m. in the Board of Supervisors Chambers, in the Administrative Building No. 1, Kings County Government Center, 1400 W. Lacey Blvd., Hanford, California. No agencies or members of the public attended the public scoping meeting.

Table 2-1 compiles the comment letters received from commenting agencies/persons during the NOP process and identifies the section(s) of the DEIR where the issues are addressed. All NOP comment letters received during the public review period are included in Appendix B.

Table 2-1 NOP Written Comments Summary

Commenting Agency/Person	Letter Dated	Summary of Comments	Issue Addressed In:
Agencies			
California Department of Conservation	September 24, 2019	• Stated that loss of agricultural land is a significant impact; recommends that all feasible mitigation measures be included. • Provides direction to include an analysis of 1) amount of farmland impact by the project, 2) impacts on current and future farmland operations, 3) cumulative impacts, 4) mitigation measures.	• Section 5.1, *Agricultural and Forestry Resources*
California Department of Fish and Wildlife	September 26, 2019	• Identifies potential impacts on special-status plant and animal species during construction activities • Recommends mitigation measures to address potential impacts to the special-status species	• Section 5.3, *Biological Resources* • Appendix D
California Department of Water Resources	September 30, 2019	• Identified concern regarding proposed plan location along the California Aqueduct and encroachment on DWR drainage easements. • Requested copies of environmental documentation pertaining to the Specific Plan when ready for public review	• Section 5.7, *Hydrology and Water Quality*
California Highway Patrol	September 26, 2019	• Identified concerns regarding increased traffic to the area that would require additional enforcement demands.	• Section 5.10, *Public Services* • Section 5.11, *Transportation* Appendix G
California Water Boards, State Water Resources Control Board	September 25, 2019	• Provided direction for submittal of a Preliminary Technical Report to obtain a domestic water supply permit for a new public water system	• Section 3, *Project Description* • Section 5.13, *Utilities and Service Systems* • Appendix H
Native American Heritage Commission	September 16, 2016	• Details NAHC's role and laws pertinent to analyzing impacts to tribal cultural resources, along with the requirements of Native American consultation pursuant to AB 52 and SB 18.	• Section 5.4, *Cultural Resources* • Section 5.12, *Tribal Cultural Resources*

Table 2-1 NOP Written Comments Summary

Commenting Agency/Person	Letter Dated	Summary of Comments	Issue Addressed In:
Pacific Gas and Electric Company	August 29, 2019	• Provided direction for the management of gas and electric facilities during construction activities	• Section 3, *Project Description* • Section 5.13, *Utilities and Service Systems*
San Joaquin Valley Air Pollution Control District	October 4, 2019	• Provides direction for analysis of air quality, health risk, and greenhouse gas. • Recommends methodology and compliance with SJVAPCD's Air Quality Guidelines for General Plans and AB 170 Requirements for General Plans. • Recommends health risk assessment • Recommends inclusion of policies that reduce or mitigate VMT • Concerned about potential public health impacts of siting warehouses within close proximity of sensitive uses. • Recommends sources for mitigation measures.	• Section 5.2, *Air Quality* • Section 5.6, *Greenhouse Gas Emissions* • Appendix C
State of California Governor's Office of Planning and Research (OPR)	September 3, 2019	• Release of Notice of Preparation	• Section 2, *Introduction*

Source: NOP comment letters provided in Appendix B.

The NOP process helps determine the scope of the environmental issues to be addressed in the DEIR. Based on this process and the Initial Study for the Specific Plan, certain environmental categories were identified as having the potential to result in significant impacts. Issues considered Potentially Significant are addressed in this DEIR, but issues identified as Less Than Significant or No Impact are not. Refer to the Initial Study in Appendix A for discussion of how these initial determinations were made.

2.3 SCOPE OF THIS DEIR

The scope of the DEIR was determined based on the County's Initial Study and comments received in response to the NOP. Pursuant to Sections 15126.2 and 15126.4 of the CEQA Guidelines, the DEIR should identify any potentially significant adverse impacts and recommend mitigation that would reduce or eliminate these impacts to levels of insignificance.

The information in Chapter 3, *Project Description*, establishes the basis for analyzing future, project-related environmental impacts. However, further environmental review by the County may be required as more detailed information and plans are submitted on a project-by-project basis.

2.3.1 Impacts Considered Less Than Significant

During preparation of the Initial Study, Kings County determined that 7 environmental impact categories were not significantly affected by or did not affect the Specific Plan. These categories are not discussed in detail in this DEIR.

- Aesthetics
- Energy
- Hazards and Hazardous Materials
- Mineral Resources
- Population and Housing
- Recreation
- Wildfire

2.3.2 Potentially Significant Adverse Impacts

During preparation of the Initial Study, Kings County determined that 13 environmental impact categories have potentially significant impacts if the Specific Plan is implemented.

- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use Planning
- Noise
- Public Services
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

2.3.3 Unavoidable Significant Adverse Impacts

This DEIR identifies three significant and unavoidable adverse impacts, as defined by CEQA, that would result from implementation of the Specific Plan.

- Air Quality
- Greenhouse Gas Emissions
- Transportation

Unavoidable adverse impacts may be considered significant on a project-specific basis, cumulatively significant, and/or potentially significant. The County must prepare a "statement of overriding considerations" before it can approve the project, attesting that the decision-making body has balanced the benefits of the proposed project against its unavoidable significant environmental effects and has determined that the benefits outweigh the adverse effects, and therefore the adverse effects are considered acceptable.

2.4 INCORPORATION BY REFERENCE

Some documents are incorporated by reference in this DEIR, consistent with Section 15150 of the CEQA Guidelines, and they are available for review at Kings County.

- **2035 Kings County General Plan.** The 2035 Kings County General Plan (County General Plan) was updated and adopted by the Kings County Board of Supervisors on January 26, 2010. The County General Plan is a policy document designed to provide long-range guidance and direction for decisions affecting the future character of Kings County. It represents the blueprint and official statement of the County's physical development as well as its economic, social, and environmental goals. The County General Plan analyzes existing conditions in the County, including physical, social, cultural, and environmental resources and opportunities. The County General Plan defines goals, objectives, and policies to guide development of land within the jurisdiction of the County through 2035. The policies outlined in the County General Plan are intended to encourage community development that lowers public service costs, support more efficient use of land, and discourage premature conversion of farmland to other uses while increasing economic and community sustainability. The County General Plan policies that are related to the Specific Plan are cited in various sections throughout this DEIR.

- **2035 Kings County General Plan EIR.** The 2035 Kings County General Plan EIR (State Clearinghouse No. 2008121020) addresses the short and long-term effects of build out of the County General Plan. Mitigation measures were imposed for impacts determined to be significant or potentially significant. Significant and unavoidable impacts were identified for biological resources.

- **Kings County Development Code.** The Kings County Development Code is enacted to assist in the implementation of federal and state planning, zoning, development, subdivision, and environmental laws, and County General Plan, and guide the orderly development of the County in a manner that promotes and protects the public health, safety, comfort, convenience, prosperity, and welfare of its inhabitants. The Development Code is referenced throughout this document as regulations governing development and land use activities within the County. Regulatory information from the Development Code are cited in various sections of this DEIR.

Chapter 13, *Bibliography*, provides a complete list of references utilized in preparing this DEIR.

2.5 DEIR REVIEW AND FINAL EIR CERTIFICATION

This DEIR is being circulated for public review for 45 days pursuant to CEQA Guidelines § 15105 and Public Resources Code § 21091. Interested agencies and members of the public are invited to provide written comments on the DEIR to the County address shown on the title page of this document. Pursuant to the Governor's Executive Order N-54-20, the DEIR is available to the general public for review on the following websites:

The DEIR are also available for public review on the Office of Planning and Research's CEQAnet web portal at https://ceqanet.opr.ca.gov/. To search for the DEIR, in the search box simply type in Jackson Ranch Specific Plan or State Clearinghouse No. 2019080497.

Further, individuals interested in a digital copy of the DEIR may also request one by emailing Chuck Kinney with the Kings County Community Development Agency at Chuck.Kinney@co.kings.ca.us.

Upon completion of the 45-day review period, Kings County will review all written comments received and prepare written responses for each. A Final EIR (FEIR) will incorporate the received comments, responses to the comments, and any changes to the DEIR that result from comments. The FEIR will be presented to Kings County for potential certification as the environmental document for the Specific Plan. All persons who comment on the DEIR will be notified of the availability of the FEIR and the date of the public hearings before the Kings County Planning Commission and Board of Supervisors.

2.6 MITIGATION MONITORING

Public Resources Code, Section 21081.6, requires that agencies adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code Section 21081 or adopted a Negative Declaration pursuant to 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration.

The Mitigation Monitoring and Reporting Program for the Specific Plan will be completed as part of the FEIR, prior to consideration of the project by the Kings County Board of Supervisors.

3. Project Description

3.1 PROJECT LOCATION

Figures 3-1, *Regional Location*, and 3-2, *Local Vicinity*, and 3-3, *Aerial Photograph*, show the location of the development area covered by the Jackson Ranch Specific Plan (Plan Area) within the regional and local contexts of Kings County (County). The Jackson Ranch Specific Plan (Jackson Ranch or Specific Plan) is in an unincorporated agricultural area of the County, consisting of approximately 415 acres adjacent to and west of Interstate 5 (I-5) at the Utica Avenue on-ramp. The Plan Area is approximately 70 miles northwest of the City of Bakersfield and 70 miles southwest of the City of Fresno. The nearest urbanized area to the Plan Area is Kettleman City, an unincorporated community of the County approximately 6 miles to the northwest (see Figure 3-1).

As shown in Figures 3-2 and 3-3, Utica Avenue forms the northern Plan Area boundary, the southbound I-5 on-ramp forms the northeastern boundary, and I-5 forms the eastern boundary. A portion of the western Plan Area boundary abuts the California Aqueduct, and 25th Avenue bisects the Plan Area from north to south. Agricultural uses are located along the northern, western, and southern edges.

3.2 STATEMENT OF OBJECTIVES

The following list of guiding principles accompany the Specific Plan's vision to guide future development and improvements that will occur in and outside the Plan Area, as well as help support the underlying purpose of the Specific Plan. These guiding principles will aid decision makers in their review of the Specific Plan and associated environmental impacts:

- **Create a Landmark Commercial/Industrial Hub.** Serve the needs of today's travelers by offering a fully amenitized rest stop as well as an ideal location for industrial enterprises. Capitalize on the unique qualities of the region through carefully crafted site planning, architecture, and landscape design. The Specific Plan provides a framework for the implementation of a cohesive project with a readily identifiable visual motif that conveys a pleasing aesthetic quality.

- **Honor the Agricultural Heritage of Kings County.** Establish a center where the agricultural heritage of the site is valued and serves as inspiration for the physical design of the project.

- **Enhance Economic Well-Being.** Encourage new employment opportunities across a variety of industries by providing flexibility in the type of tenants allowed in the Specific Plan. An emphasis on support of new businesses and job creation will enhance the regional and local economy.

- **Optimize Opportunity Through Diversity.** Capitalize on the scale and highly visible location of Jackson Ranch as an opportunity to offer a complementary range of uses including retail, service, hospitality, office, and industrial to appeal to a range of business types.

- **Encourage a Healthy Environment.** In the commercial area, pedestrian access and outdoor spaces will be provided.

3.3 PROJECT DESCRIPTION

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

Following is a detailed description of the Specific Plan and the various elements and improvements that will be implemented as a part of the Specific Plan.

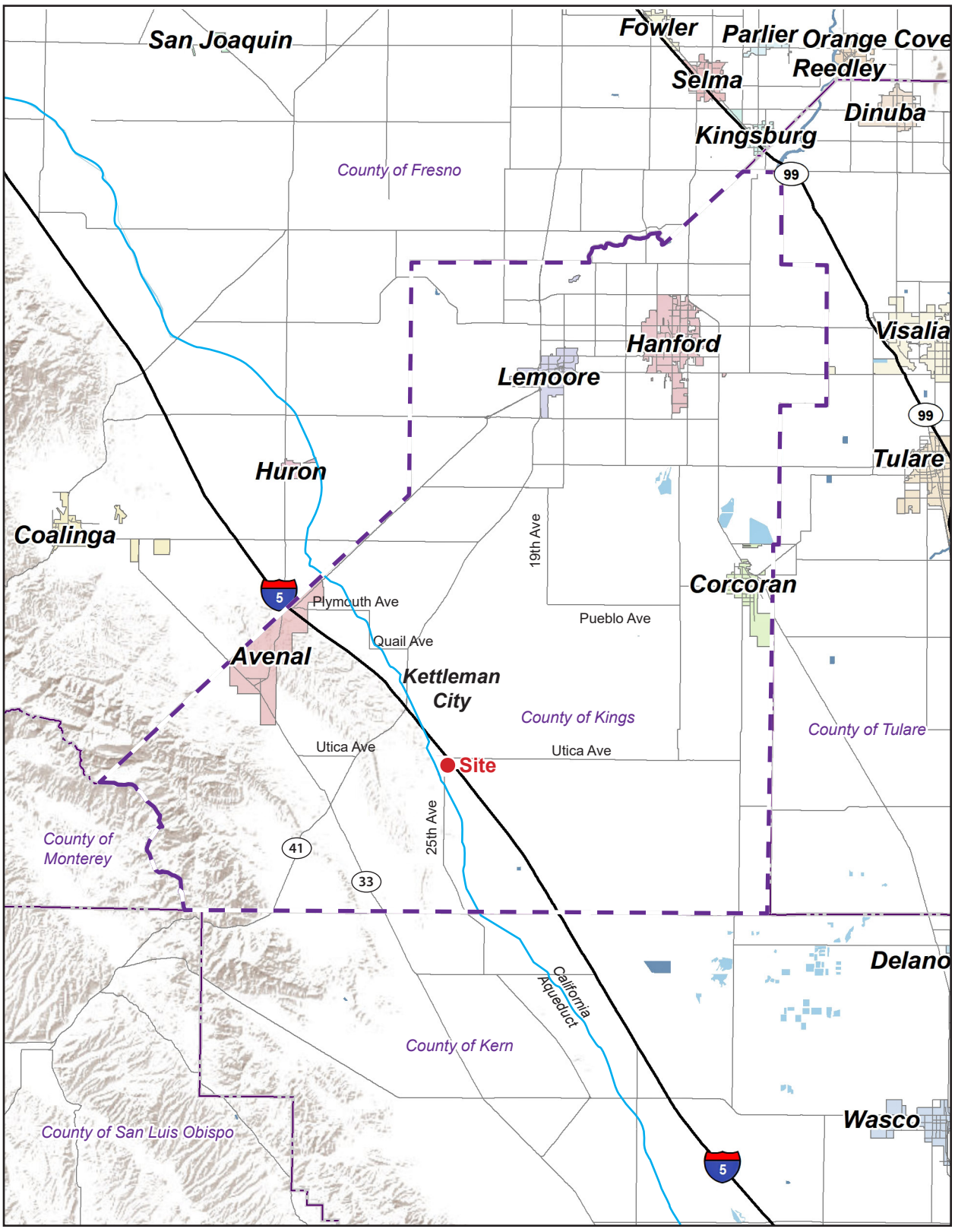
3.3.1 Proposed Land Uses and Buildout

The Specific Plan will allow for the phased and systematic development of the Plan Area over the next 20 years in accordance with the vision and guiding principles of the Specific Plan. The Plan Area covers approximately 415 acres along I-5 at the Utica Avenue on-ramp in unincorporated Kings County (see Figure 3-3, *Aerial Photograph*). Of the 415 acres that make up the Plan Area, approximately 141 acres (or 34 percent) would be developed with a mix of uses.

Jackson Ranch will serve as an innovative service industrial and commercial center that will encourage economic growth while preserving the agricultural heritage of the region. As the halfway point between San Francisco and Los Angeles, Jackson Ranch offers a visible and viable high commercial-oriented rest stop to the high volume of motorists who pass by annually. Upon completion, Jackson Ranch will be the only stop to offer food, lodging, a truck stop, and service stations within a 31-mile stretch of I-5, stretching from Kettleman City to the north to State Route 46 to the south. Jackson Ranch also provides an ideal location for trucks to transfer goods and truck drivers to rest and fuel up via a truck stop. Furthermore, Jackson Ranch will serve as an industrial hub, providing an ideal location for industrial enterprises.

Proposed land use designations of the Specific Plan are shown in Figure 3-4, *Specific Plan Land Use Plan*, and a general description of these designations is provided in Table 3-1. As shown in the figure and table, the Specific Plan provides for three primary land use designations, and one overlay designation. The figure and table also break out the area to be dedicated for streets.

Figure 3-1 - Regional Location
3. Project Description



Kings County Boundary

Note: Unincorporated county areas are shown in white.

Source: ESRI, 2019

0 10
Scale (Miles)

3. Project Description

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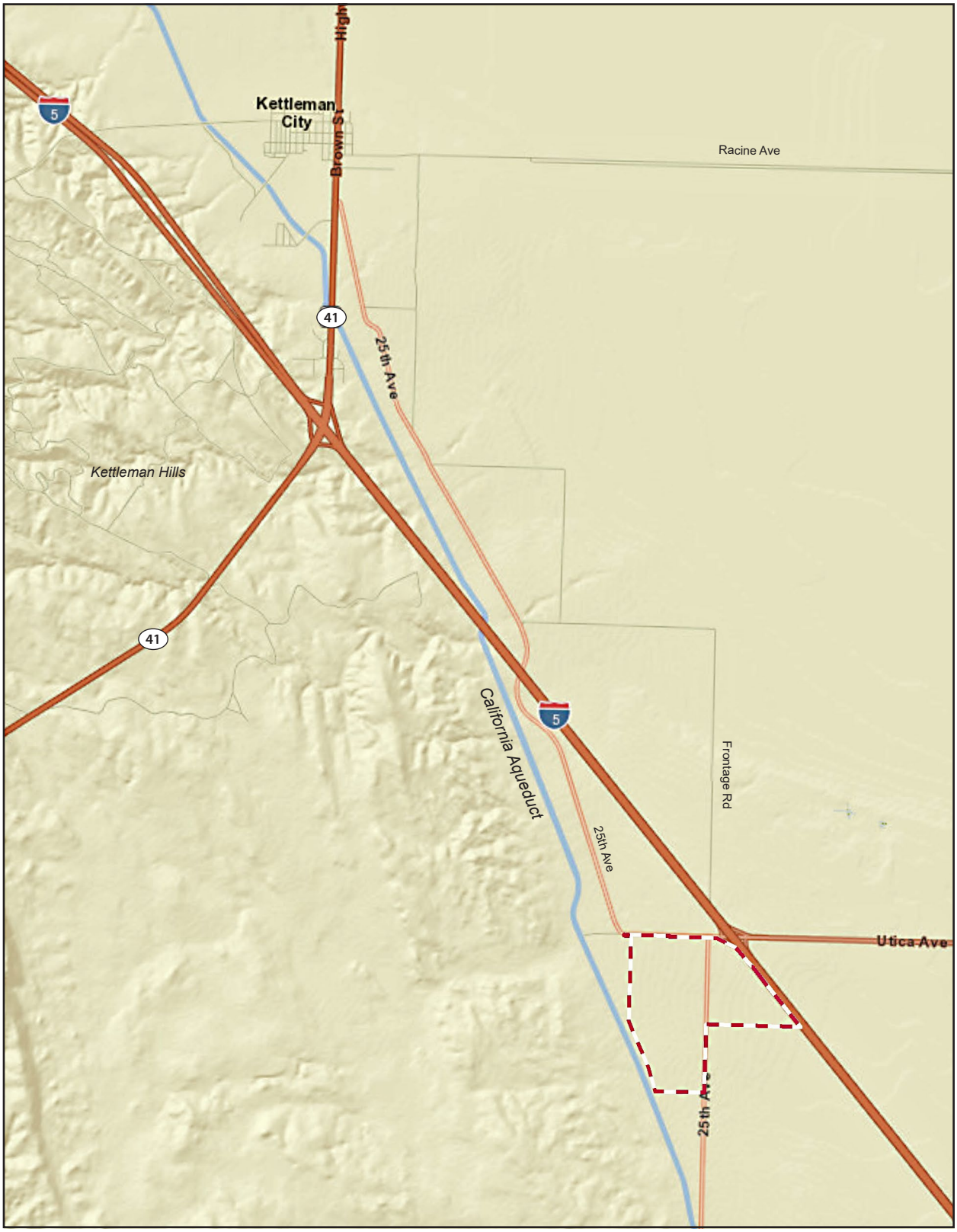
Figure 3-2 - Local Vicinity
3. Project Description



Plan Area Boundary

0 1
Scale (Miles)

Source: ESRI, 2019

3. Project Description

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Figure 3-3 - Aerial Photograph
3. Project Description

Plan Area Boundary

0 2,000
Scale (Feet)

Source: ESRI, 2019

3. Project Description

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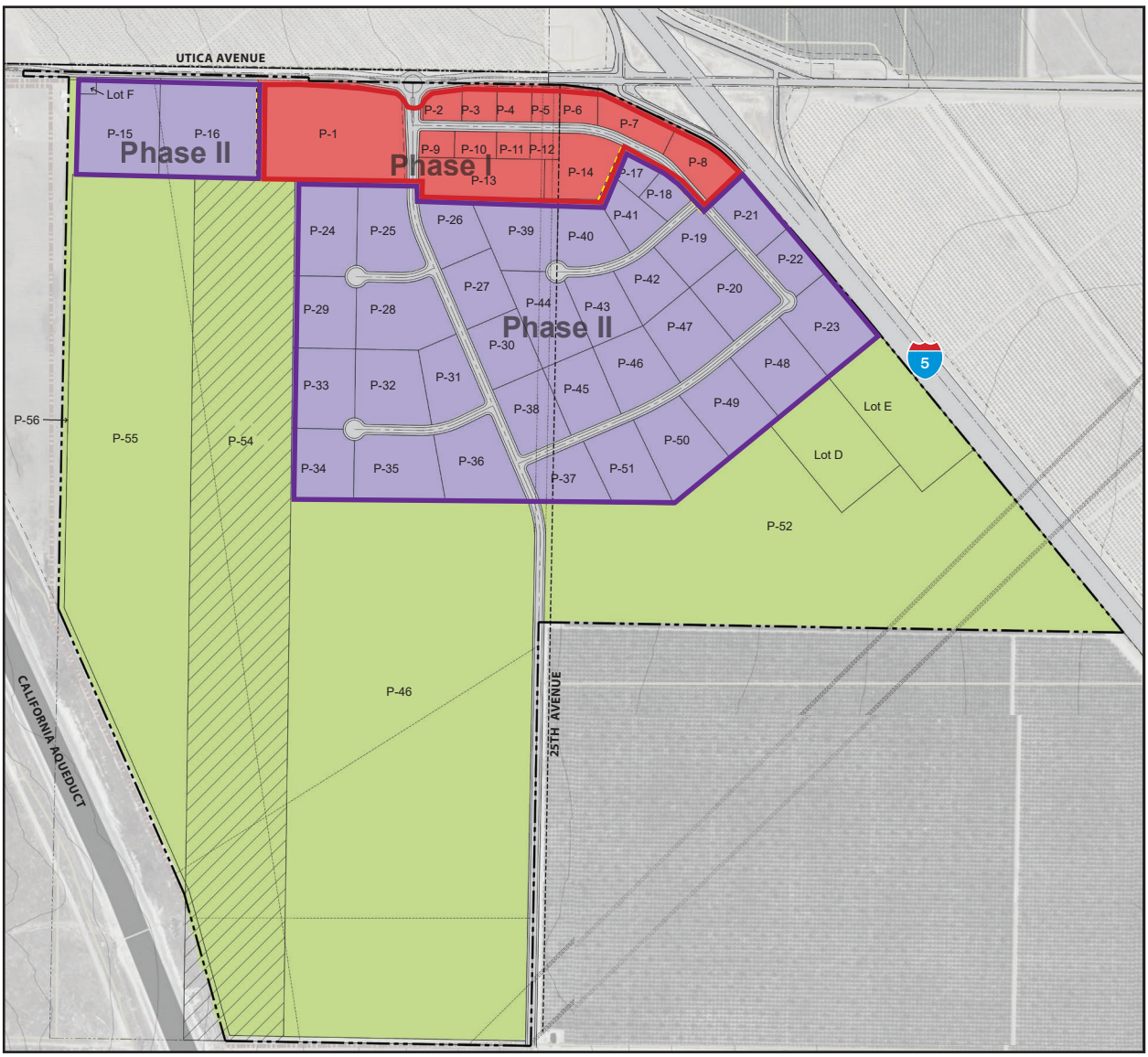
Figure 3-4 - Specific Plan Land Use Plan

3. Project Description



Plan Area Boundary

Phase I

Phase II

Land Use Designation

Commercial Thoroughfare (CT-JR)

Innovation Center (IC-JR)

Specialty Agriculture (A-JR)

Specialty Agriculture with Air Strip Overlay (A-JR)

Streets

0 1,000
Scale (Feet)

Source: ESRI, 2020

3. Project Description

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Table 3-1 Jackson Ranch Specific Plan Land Use Designations

Designation	Description
Commercial Thoroughfare (CT-JR)	Provides a safe stop for existing travelers along I-5. This area is envisioned as a well-planned project providing food, lodging, amenities, and entertainment to both professional and leisure travelers along I-5.
Innovation Center (IC-JR)	Provides a prime location for inventive new and expanding businesses. Allows for a range of uses including light industrial, research and development, medical offices, hospitals, office, hospitality, retail, and entertainment.
Specialty Agriculture (A-JR)	Provides a buffer between more intensive agricultural uses of the General Agriculture district, and urban areas. This area is meant to be compatible with nonagricultural uses.
Specialty Agriculture with Air Strip Overlay (A-JR)[1]	
Streets	Consists of arterial, collector and local street classifications and rights-of-way.

[1] Development of an air strip within the Air Strip Overlay is a potential future use and is not a part of the Specific Plan's project scope at this time. If the air strip overlay is implemented in the future, additional CEQA review will be required to address the potential environmental impacts of developing an air strip.

A statistical summary of the Specific Plan's land use areas and associated development potential and jobs is provided in Table 3-2. As shown in the table, just under 2.4 million square feet of commercial space is planned for Jackson Ranch, with the majority of it slated for the area designated as Innovation Center (IC-JR). This designation allows for a range of uses including light industrial, research and development, medical offices, hospitals, office, hospitality, retail, and entertainment. The area encompassing the Commercial Thoroughfare (CT-JR) land use designation is envisioned as a well-planned project providing food, lodging, amenities, and entertainment to both professional and leisure travelers along I-5. As also shown in the table, approximately 1,617 jobs will be created by Jackson Ranch.

Table 3-2 Jackson Ranch Specific Plan Land Use Statistical Summary

Land Use Area	Acres	Maximum FAR	Maximum Building Sq. Ft.	Jobs
Commercial Thoroughfare (CT-JR)	27.2	0.40	161,125	470
Innovation Center (IC-JR)	114.0	0.45	2,230,708	1,099
Specialty Agriculture (A-JR)	211.5	—	—	48
Specialty Agriculture with Air Strip Overlay (A-JR)	56.3	—	—	—
Streets	6.1	—	—	—
Total	**415.1**	**—**	**2,391,833**	**1,617**

Source: Jack Ranch Specific Plan 2020
Notes: FAR = floor area ratio; Sq. Ft. = square feet

As detailed in Section 3.3.4, *Project Phasing*, for purposes of this Draft Environmental Impact Report (DEIR), Jackson Ranch is anticipated to be developed in two phases: the first phase (Phase One) consists of buildout of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*, and the second phase (Phases Two through Seven) consists of the portion of the Plan Area designated as Innovation Center (IC-JR) in Figure 3-4. Development of Phase One would serve as the key development piece and initial opening of Jackson Ranch. For planning and financing purposes, development of the subsequent phases will occur in response to market demands.

3.3.2 Proposed Entitlements

In order to implement the Specific Plan, a General Plan Amendment to change the General Plan land use designation of the Plan Area from General Agriculture-40 Acre (current General Plan land use designation) to Jackson Ranch Specific Plan is required. Under the Specific Plan, approximately 141 acres, or 34 percent of the Plan Area, will be designated as Commercial Thoroughfare (CT-JR) and Innovation Center (IC-JR) (see Figure 3-4, *Specific Plan Land Use Plan*), which will allow a range of commercial, retail, light industrial, research and development, office, and hospitality uses. Approximately 268 acres, or 65 percent of the Plan Area, is proposed to be designated as Specialty Agriculture (A-JR). It is anticipated that active agriculture will continue in the Specialty Agriculture-designated areas of the Plan Area during and after the development of Jackson Ranch.

Additionally, approximately 56 of the 268 acres to be designated Specialty Agriculture will include an Air Strip Overlay, which will allow for the development of a potential future private air strip in the Plan Area. Pursuant to the Specific Plan, development of an air strip is a potential future use that is permitted in the Specialty Agriculture (A-JR) land use designation only via County issuance of a Conditional Use Permit. Development of an air strip is not a part of the Specific Plan's project scope at this time, and therefore, is not analyzed in this DEIR. If the Air Strip Overlay is implemented in the future, additional environmental review and approval from local and federal agencies pursuant to CEQA will be required to address the potential environmental impacts of developing an air strip.

Furthermore, implementation of the Specific Plan will require an amendment to the Kings County Development Code and Zoning District Map. Specifically, the Development Code Amendment is needed to add the Jackson Ranch Specific Plan by reference and the Zoning District Map Amendment is needed to change the zoning district from AG-40 to Jackson Ranch Specific Plan. The existing zoning district of the Plan Area will also be replaced with the new Specific Plan land use areas. Additionally, the Development Code Amendment will state that the regulating code contained in the Specific Plan will serve as the regulatory plan (zoning, development, and design standards and guidelines) for all development projects and improvements in the Plan Area.

The California Government Code (Title 7, Division 1, Chapter 3, Article 8, Sections 65450–65457 [Specific Plans]) provides authority for a county to adopt a specific plan by ordinance (as a regulatory plan) or resolution (as a policy plan). When a specific plan is adopted by ordinance, the specific plan effectively replaces portions or all of the current zoning regulations for specified parcels and becomes an independent set of zoning regulations that provide specific direction to the type and intensity of uses permitted or define other types of design and permitting criteria. The Specific Plan will be adopted by the Kings County Board of Supervisors as ordinance and function as the regulatory plan that serves as the implementing zoning for the Plan Area, thereby, ensuring the orderly and systematic implementation of the Kings County General Plan, as well as the orderly and systematic development of the Plan Area.

This Specific Plan allows for greater specificity and flexibility in carrying out the King County General Plan—it acts as a bridge between the general plan and development activities and improvements that will occur within the Plan Area. The Specific Plan establishes the necessary land use plan, development standards,

design guidelines, infrastructure systems, and implementation strategies on which subsequent, project-related development activities will be founded. It is intended that design review plans, detailed site plans, grading and building permits, or any other County action requiring ministerial or discretionary approval applicable to the Plan Area be consistent with the intent and vision of the Specific Plan.

Finally, to allow development of the Plan Area pursuant to the Specific Plan, County approval of Vesting Tentative Parcel Map (VTPM) No. 2020-931 is required. The tentative map facilitates the division of land and provides clear transfer of ownership of any lots that are created; it is the parcel configuration proposed prior to a final or parcel map, the official recorded document. The parcel map will allow for creation of the 51 lots that will make up the Plan Area—it will allow for the division of land for the purpose of sale, lease, or financing, whether immediate or future, with certain exceptions. The parcel map will also ensure common ownership and maintenance of all proposed components and improvements within a lot—it is also the legal mechanism for public street dedications and improvements to existing infrastructure, including the widening of Utica Avenue.

3.3.3 Development Standards and Design Guidelines

Any proposed development activities within the Plan Area will be required to comply with the development standards contained in Chapter 4 of the Specific Plan. This chapter sets forth the development standards and regulations that apply to development projects, plans and activities (i.e., new development, building enhancements, landscape and signage improvements, and site and infrastructure improvements) within the Plan Area. The standards and regulations address site development issues (e.g., permitted uses, development intensity, parking requirements, building setbacks and heights) and provide the basic criteria that govern all development within the Plan Area.

The Specific Plan also includes design guidelines. The design guidelines are intended to promote quality design, consistent with the overall vision, while providing a level of flexibility to encourage creative design. The design guidelines direct the physical design of building sites, architecture, landscape elements, signage, and roadways within the Plan Area. This comprehensive approach represents a more understandable and predictable way to shape the physical future of the Plan Area by emphasizing building form and landscape design that reinforce the Specific Plan's vision for the Plan Area.

Together, the development standards and design guidelines set forth the standards intended to carry out the Specific Plan's vision for the Plan Area and form the foundation upon which all planning and implementation decisions will be based.

3.3.4 Infrastructure Plans and Utility Systems

Jackson Ranch includes on- and offsite infrastructure plans and utility systems that are necessary to serve development that will be accommodated by the Specific Plan, including plans for mobility, drainage, potable water, wastewater, dry utilities (electricity, natural gas, and telecommunication services), and solid waste collection and disposal. Following is a description of the infrastructure plans and utility systems needed to serve the Plan Area. As described in Section 3.3.4, *Project Phasing*, development under each phase of Jackson

Ranch will be provided with the infrastructure plans and utilities systems needed to adequately serve the land uses of the phase in question.

3.3.4.1 MOBILITY PLAN

As shown in Figure 3-3, *Aerial Photograph*, the Plan Area and its surroundings primarily consist of active and fallow agricultural land or rangeland. Roadways abutting and serving the Plan Area consist of Utica Avenue, 25th Avenue, and I-5. There are no pedestrian, bicycle, or public transportation facilities or improvements on or within proximity of the Plan Area.

The mobility plan for Jackson Ranch addresses all aspects of the public realm within street rights-of-way, including landscaping, sidewalks, and travel lanes. The mobility plan does not include any bicycle or public transportation facilities or improvements, as none are needed to serve the Plan Area due to its intended use and location in the County where no such facilities or improvements exist. Following is a discussion of the vehicular and pedestrian access and circulation components of the Specific Plan's mobility plan.

Vehicular Access and Circulation

The mobility plan includes three street classifications—arterial streets, collector streets, and local streets—that make up approximately six acres of the Plan Area. Following is a description of each roadway classification (including dimensions and improvements), and Figure 3-5, *Vehicular Circulation Plan*, illustrates the proposed roadways that will serve the Plan Area. All roadway improvements will be installed and paid for by the project applicant/developer. Upon completion, all public roads will be dedicated to the County, and Caltrans where necessary, for ownership and maintenance.

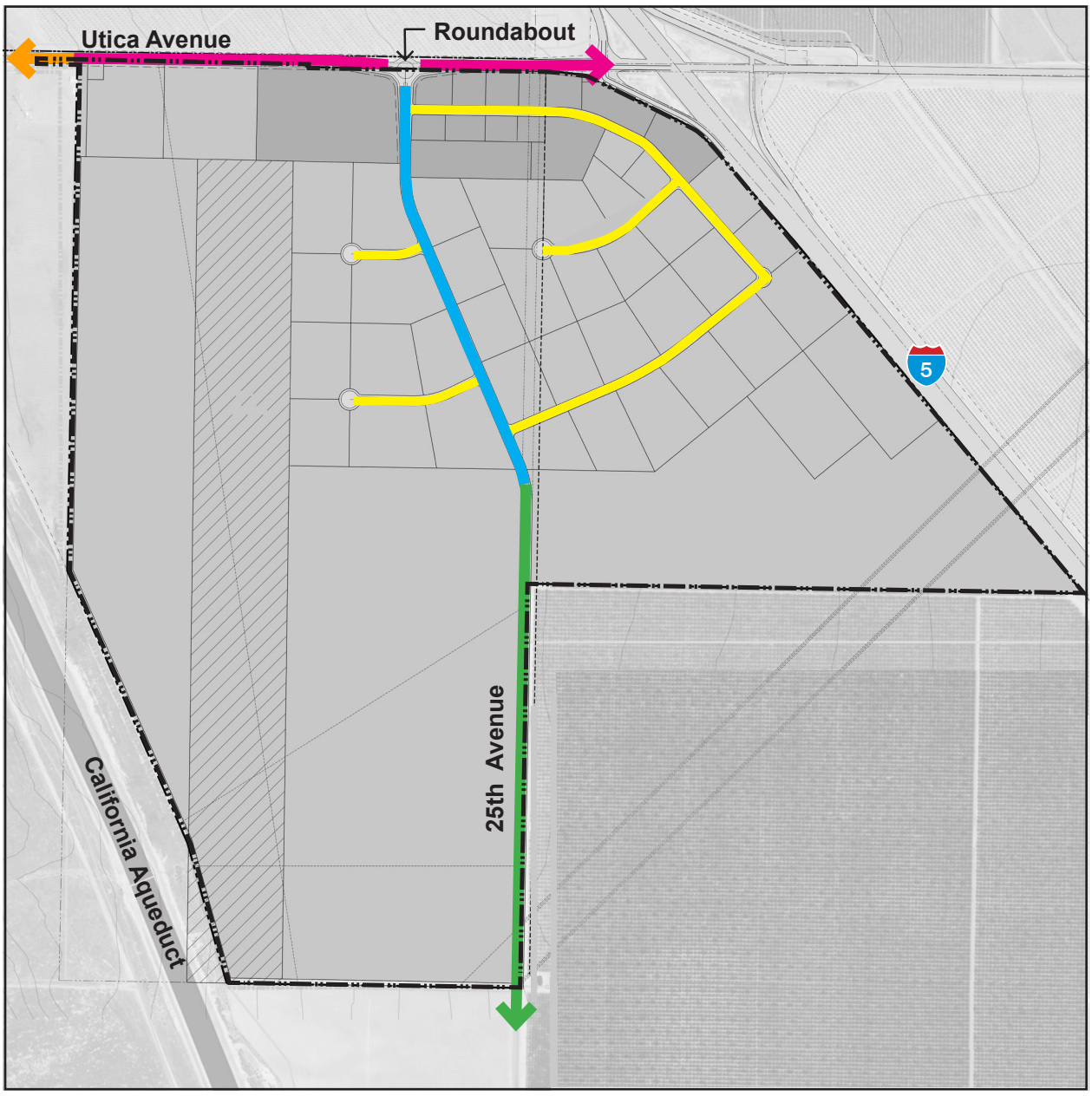
- **Arterial Street.** Utica Avenue serves as an arterial street, connecting the Plan Area to I-5 and 25th Avenue. Following is a description of the two segments that make up the proposed improvements to the portion of Utica Avenue that forms the northern Plan Area boundary. For planning purposes and clarification, the improvements proposed for Utica Avenue will be constructed prior to or as a part of Phase One of the Specific Plan (see phasing discussion in Section 3.3.4, *Project Phasing*). Any future right-of-way improvements to the north side of the curb will be implemented/undertaken by the property owner/developer to the north.

    - **Utica Avenue A, or westernmost portion.** Under proposed conditions, this portion of Utica Avenue includes two travel lanes (24 feet in width from curb face to curb face) within a 37-foot right-of-way. Also included in the right-of-way is an 8-foot wide landscaped parkway on the south side of the roadway.

    - **Utica Avenue B, or central and eastern portions.** Under proposed conditions, this portion of Utica Avenue includes four travel lanes (52 feet in width from curb face to curb face) within a 75-foot right-of-way. Also included in the right-of-way is a 12-foot wide landscaped parkway on the south side of the roadway.

Figure 3-5 - Vehicular Circulation Plan

3. Project Description



Plan Area Boundary

Vehicular Designations

- Arterial - Utica Avenue A (Public)
- Arterial - Utica Avenue B (Public)
- Collector - 25th Ave. Developed Area (Public)
- Collector - 25th Ave. Agricultural Area (Public)
- Local Street (Private)

0 1,000
Scale (Feet)

Source: ESRI, 2019

3. Project Description

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- **Roundabout at Utica Avenue and 25th Avenue.** Utica Avenue will feature a roundabout at its intersection with 25th Avenue. The roundabout will function as the main entry into the Plan Area—it will feature a 24-foot wide travel lane, 10-food wide apron, and 100-foot wide landscaped central island. The size of the roundabout will be designed to match anticipated traffic volumes, with a right-of-way of 174 feet in width. An 11-foot wide landscaped parkway will be provided along the southern portion of roundabout.

  The roundabout will help maintain traffic flow along Utica Avenue and 25th Avenue and serve as a unique design and circulation feature for Jackson Ranch. The roundabout will reduce capital and operational costs for the County and promote safer vehicular travel along Utica Avenue and 25th Avenue. In addition to slowing down traffic, roundabouts reduce the potential for head-on collisions because all traffic moves in the same direction. Roundabouts require entering motorists to yield at the entry, and once there is a gap in traffic, motorists turn right into the circle and follow around counterclockwise until they reach the connecting street they want and turn right again, exiting the roundabout. The circulating traffic constantly moves, though more slowly than through a traditional four-way intersection.

- **Collector Street.** The collector street of the Plan Area is 25th Avenue, and a realignment of this street is planned to create more stacking distance for vehicles traveling north on this street toward the Utica Avenue/I-5 on-/off-ramps. Within the developed portions of the Plan Area (see Figure 3-5), a 62-foot right-of-way is proposed, which will accommodate two travel lanes (40 feet from curb-to-curb), a 6-foot-wide, curb-adjacent landscape parkway and a 5-foot-wide sidewalk on both sides of the street. Within the agricultural portions of the Plan Area (see Figure 3-5), the 25th Avenue right-of-way will remain at the existing width of 60 feet, which will accommodate two travel lanes (40 feet from curb-to-curb) and 10-food wide curb-adjacent landscape parkway on both sides of the street.

- **Local Streets.** Local streets will be private and will provide access to individual development areas (see Figure 3-5). These streets feature a 56-foot right-of-way, with a 32-foot curb-to-curb distance to accommodate two travel lanes. A 7-foot-wide, curb-adjacent parkway and 5-foot-wide sidewalk will be provided on both sides of these streets.

For planning purposes and clarification, the improvements proposed for Utica Avenue, including the roundabout, will be constructed prior to or as a part of Phase One of the Specific Plan (see phasing discussion in Section 3.3.4, *Project Phasing*).

Pedestrian Access and Circulation

As noted above, there are no pedestrian circulation improvements currently serving the Plan Area or its surroundings. The pedestrian access and circulation improvements for Jackson Ranch include a system of sidewalks along all internal public and private roads, and along the southern boundary of Utica Avenue. As described above, some of the rights-of-way for the various roadways will include sidewalks. Individual development projects will provide pedestrian walkways internal to the development sites that will connect to the sidewalks proposed along the roadways, as well as to provide a means for pedestrians to circulate within the development sites. The proposed pedestrian circulation plan would only serve to connect uses in the Plan

Area; it would not provide any offsite connections to adjacent or surrounding agricultural properties as there are no walkable destinations.

3.3.4.2 POTABLE WATER MANAGEMENT PLAN

Agricultural Uses

Currently, the Dudley Ridge Water District delivers State Water Project water from the adjacent California Aqueduct to the Plan Area for irrigation and fire protection purposes of the existing agricultural uses. The aqueduct is owned by the California Department of Water Resources (CDWR) and operated and maintained by CDWR's Division of Operations and Maintenance. Irrigation water is provided via direct connections to the aqueduct, which then feeds into a system of irrigation lines throughout the Plan Area. Water supply from the aqueduct will continue to be used for irrigation and fire protection purposes via the existing connections to the aqueduct. No activities or improvements within CDWR's property or easements are proposed under the Specific Plan, and no improvements or modifications to the existing aqueduct connections are proposed.

Non-agricultural Uses

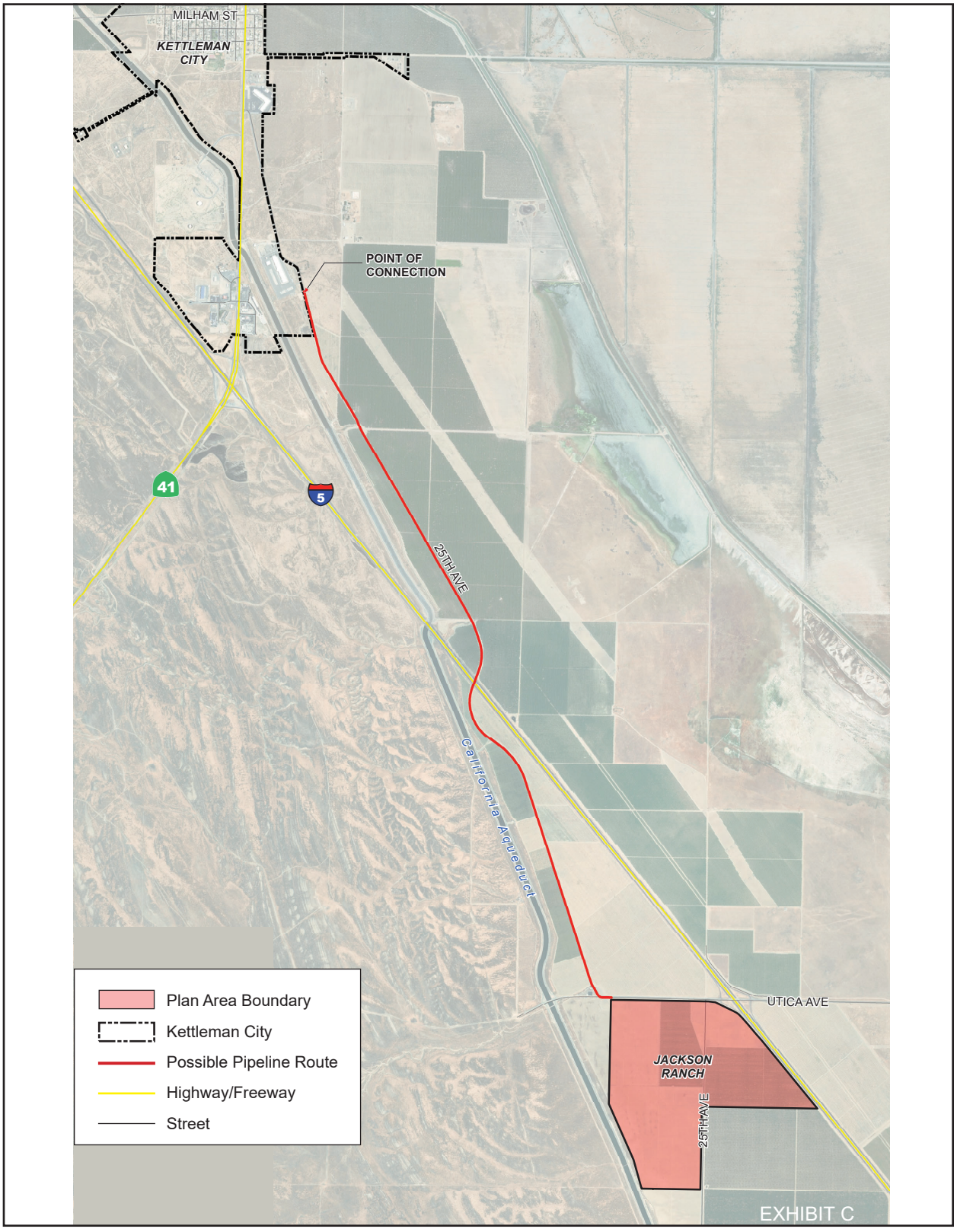
In order to provide potable water to the future non-agricultural uses of the Plan Area, an offsite potable water main will be installed from the new and fully operational Kettleman City Surface Water Treatment Plant (SWTP) within the County's right-of-way in 25th Avenue, which is a paved roadway that is maintained by the County, to the Plan Area. The water main will be installed in an acceptable location within the right-of-way of 25th Avenue; it will be installed at the required design depth of the Kings County Public Works Department requirements. Construction and installation of the entire water main will require approximately 60 days to complete and will be constructed prior to or as a part of Phase One of the Specific Plan (see phasing discussion in Section 3.3.4, *Project Phasing*). The offsite water system will be installed by and paid for by the project applicant/developer and upon completion, the system will be dedicated to the Kettleman City Community Services District (KCCSD) for ownership and maintenance.

As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed potable water main will be approximately 4.2 miles in length and constructed from the northern boundary of the Plan Area to a connection point in Kettleman City that ties into the SWTP service, which is owned and operated by KCCSD. Once in full operation, the SWTP will provide the Specific Plan's potable water needs.

Installation of the water main and connection to the SWTP will require review and approval by KCCSD. It will also require approval from the Local Agency Formation Commission (LAFCO) of Kings County for any KCCSD boundary or service extension that will be needed to serve the Specific Plan's potable water needs. Currently, the Plan Area is not in KCCSD's service area or sphere of influence (SOI) and therefore requires a SOI Amendment and service extension authorization with future annexation into their service area. Expanding the KCCSD SOI to include the Interstate 5/Utica Avenue area and anticipated annexation into the district are in line with the County's General Plan goals and policies that direct highway-commercial development projects to consolidate with the most adjacent water service provider. In this case, Jackson Ranch would connect to KCCSD in lieu of developing an onsite private water system that depends on water from the State Water Project via the California Aqueduct.

Figure 3-6 - Proposed Offsite Water Main Route

3. Project Description



Source: Yamabe & Horn Engineering, Inc., 2018

3. Project Description

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Development of a private water system would be less advantageous and require the formation of an independent company, which is in conflict with directives of the California Department of Water Resources. Annexing into KCCDS's service area and SOI serves as a long-term mutual benefit for KCCSD and land uses and users of the Specific Plan, as it allows for a reliable and sustainable potable water source for Jackson Ranch without any interruptions or risks that come from private water systems and the State Water Project. For highway-commercial developments such as Jackson Ranch, it is the County's desire to forgo the risks and uncertainty associated with private water systems that rely on the State Water Project.

Extending KCCDS's SOI and service would also be in conformance with the provisions of Senate Bill 88 (Statutes 2015, Chapter 27), which became effective June 24, 2015, and added sections 116680-116684 to the California Health and Safety Code. This bill authorizes the State Water Resources Control Board to force consolidation of a water system that consistently fails to provide an adequate supply of safe drinking water. An extension of service to Jackson Ranch would ensure a long term adequate supply of safe drinking water. Upon LAFCO's approval of the SOI expansion, Jackson Ranch would be fully consolidated into KCCD's service area. Furthermore, installation of the offsite water main may require Caltrans review and approval. Once the water main improvements reach the 25th Avenue overpass at I-5 (see Figure 3-6), two scenarios could occur:

- **Preferred Scenario.** The water main will be installed in the bridge deck of the overpass structure. This scenario will require review and approval by the County and possibly Caltrans.

- **Alternative Scenario.** The water main will traverse downward and under I-5, which will require boring under the freeway. In addition to the County, this scenario will also require review and approval (including issuance of an encroachment permit) by Caltrans.

In addition to installation of the offsite water main, a system of underground water mains will be provided throughout the Plan Area to serve the individual development sites, as shown in Figure 3-7, *Potable Water Management Plan*. The onsite water system will connect to the new offsite water service being constructed in Utica Avenue. Onsite water systems will be located within roadways and easements as appropriate and typical for new development and will require review and approval by the County.

Furthermore, the current water supply from the adjacent California Aqueduct will to be used for landscaping and fire protection purposes only of development accommodated by the Specific Plan. Fire hydrants will also be installed in key locations in the Plan Area, as required by the Kings County Fire Department, to provide adequate fire protection.

3.3.4.3 STORMWATER MANAGEMENT PLAN

Due to the agriculturally-developed nature of the Plan Area and its surroundings (see Figure 3-3, *Aerial Photograph*), there are no local or regional stormwater drainage improvements in or surrounding the Plan Area. Currently, all stormwater sheet flows throughout the Plan Area and directly percolates into the site soil.

The existing topography of the Plan Area is a gentle slope that drains to the southeast at approximately one-to-two percent. The Plan Area will be graded to maintain the overall existing, natural drainage patterns of the

area and minimize the amount of cut-and-fill operations. The Specific Plan's stormwater will be collected via surface flow into a master plan system of storm drain open channels, inlets and pipes throughout the Plan Area that will convey the stormwater into a master plan retention basin (basin) that is designed to store 100 percent of the runoff from a 10-year, 10-day rainfall event, per the Kings County Improvement Standards (see Figure 3-8, *Stormwater Management Plan*). The basin will be located in the eastern portion of the Plan Area, just west of I-5 and within the Specialty Agriculture-designated area of the Specific Plan (see Figure 3-8). The basin will occupy approximately six acres of the Plan Area.

Each individual development parcel will have the option to direct their drainage to the streets via surface flow or by installing an onsite storm drain system that will tie into the master plan storm drain system depending on the individual constraints of the parcel and/or the proposed user. For example, an industrial user that would be constructing a building with depressed loading docks may not be able to surface drain to the streets due to the amount of fill that would be required to allow the property to surface drain. Instead of surface draining, they will have the ability to design an onsite collection system that will tie into the master plan storm drainage system in order to get their stormwater to the basin.

The phasing of the Specific Plan will control the amount of the basin volume and detention area that is required. The basin will not need to be built to its ultimate capacity in the initial phases of development. As new areas of the Jackson Ranch are developed, the basin will be expanded to meet the required stormwater volume.

3.3.4.4 WASTEWATER MANAGEMENT PLAN

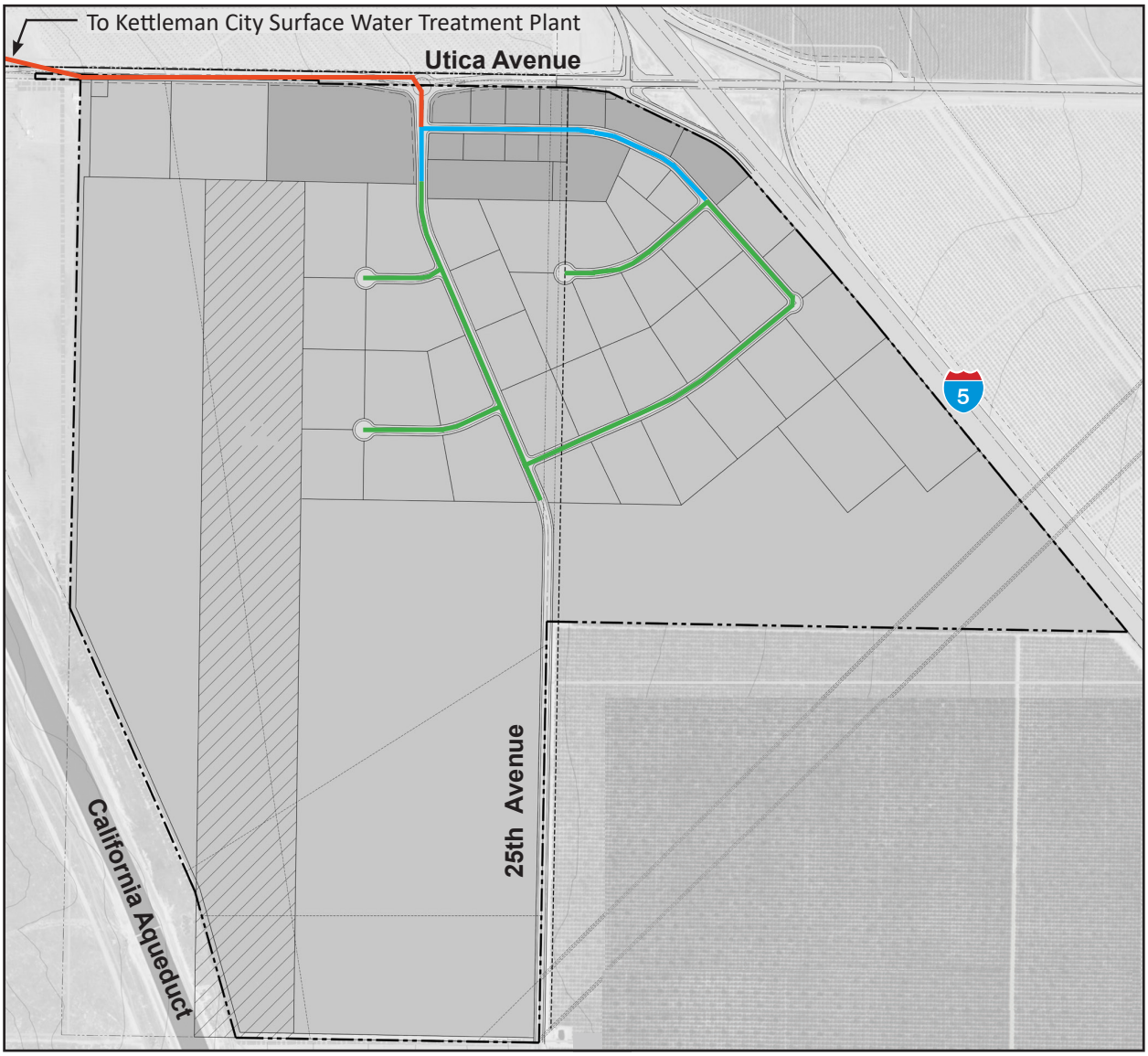
Due to the agriculturally-developed nature of the Plan Area and its surroundings (see Figure 3-3, *Aerial Photograph*), there are no existing wastewater infrastructure improvements or facilities in or surrounding the Plan Area. In order to provide wastewater service to the future uses of the Plan Area, a wastewater collection and treatment system will be developed for the Plan Area (see Figure 3-9, *Wastewater Management Plan*). The system will consist of a wastewater collection system comprised of grease interceptors, influent screeners, pump tanks and associated gravity main piping; and a small domestic wastewater treatment facility (WWTF) that will provide primary and advanced secondary treatment of wastewater. The WWTF's treatment process will include primary and secondary septic tanks, flow equalization, recirculating media filter systems, denitrification, and sand filter dispersal systems as further described below. Pursuant to Section 603 of the Kings County Improvement Standards, the WWTF would be privately operated and maintained.

The WWTF will be located in the eastern portion of the Plan Area, abutting I-5 and within the Specialty Agriculture-designated area of the Specific Plan (see Figure 3-9). The WWTF will occupy approximately 6.6 acres of the Plan Area—it will be secured with fencing and access will be provided via a gravel access road abutting I-5. Aside from the proposed location of the WWTF, Figure 3-9 illustrates the other improvements associated with the overall wastewater management plan for Jackson Ranch.

Wastewater generated by land uses in the Plan Area will flow by gravity through a network of privately-maintained sewer laterals and mains to the WWTF. As shown in Figure 3-9, the sewer laterals and mains will be provided throughout the Plan Area to serve the individual development sites. The sewer laterals and mains will be located within roadways and easements as appropriate and typical for new development.

Figure 3-7 - Potable Water Management Plan

3. Project Description



Plan Area Boundary
Proposed 4" Main - Phase I
Proposed 8" Main - Phase I
Proposed 4" Main - Future Phases

0 1,000
Scale (Feet)

Source: ESRI, 2020

3. Project Description

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Figure 3-8 - Stormwater Management Plan

3. Project Description

Plan Area Boundary
Proposed 18" Main - Phase I
Proposed 18" Main - Future Phases
Proposed 24" Main - Future Phases
Proposed 30" Main - Future Phases
Proposed 54" Main - Future Phases
Retention Area - Phase I
Retention Area - Future Phases

0 1,000
Scale (Feet)

Source: ESRI, 2020

3. Project Description

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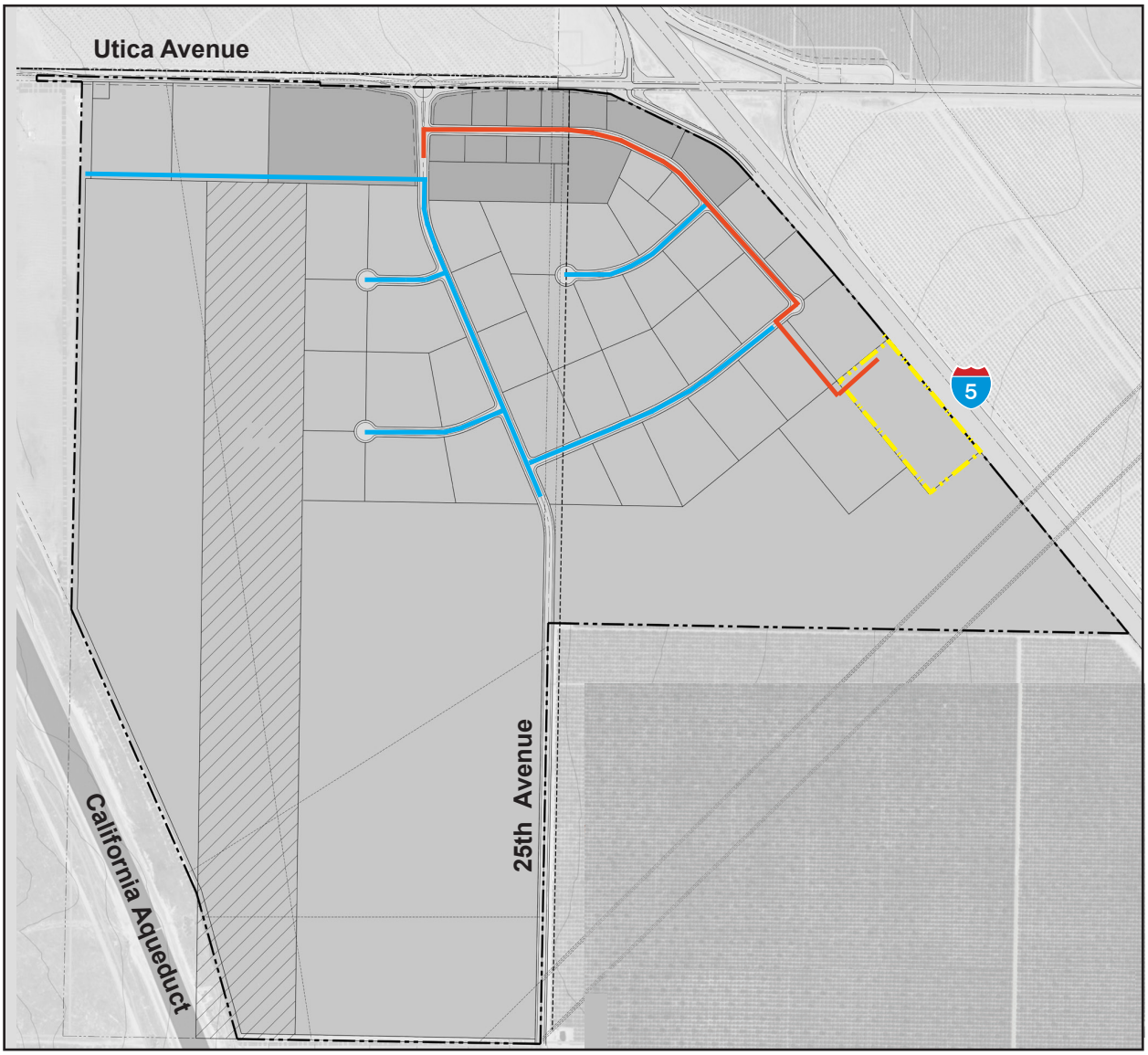
Figure 3-9 - Wastewater Management Plan

3. Project Description



Plan Area Boundary

Proposed 8" Main - Phase I

Proposed 8" Main - Future Phases

Wastewater Treament Facility Area

0 1,000

Scale (Feet)

Source: ESRI, 2020

3. Project Description

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Upon entering the WWTF, wastewater will be treated to advanced secondary treatment levels using primary and secondary septic tanks, flow equalization, and a specially-designed recirculating media filtration system. Grease interceptors (where necessary) and influent screeners will be installed as part of the wastewater collection system to intercept debris and fats, oils, and grease prior to entering the WWTF. The WWTF will be designed to treat up to a peak flow of 75,000 gallons per day of wastewater.

The media filter system will consist of an engineered, patented passive aerobic biological treatment system that uses naturally-occurring bacteria and other microorganisms in the wastewater to digest organic contaminants. Flow to each of the WWTF's modules will be delivered in timed doses. After passing through the system, the filtered effluent (filtrate) will be captured and conveyed by gravity to split recirculation/discharge pump tanks. Flow splitter valves and pump systems within these tanks will direct filtrate to either be recirculated back to the primary septic tank anoxic zone for denitrification or discharged to pressure dose sand lined (sand filter) dispersal beds depending on the desired recirculation ratio. This recycling process will provide greater than 50 percent nitrogen removal. The sand filter dispersal beds will provide additional treatment and allow for the dispersal of the filtrate to the native soils. Filtrate will be delivered in timed doses and distributing valves will be used to alternate flow to each filter bed.

Construction and installation of the WWTF and its pertinent facilities and improvements will require approximately four months to complete and the initial phase will be constructed prior to or as a part of Phase One of the Specific Plan (see phasing discussion in Section 3.3.4, *Project Phasing*). The WWTF will be installed and paid for by the project applicant/developer. Upon completion, the WWTF will be privately owned, operated, and maintained. The criteria used for the design, construction, and operation of WWTF will meet or exceed the established Kings County and State of California guidelines and standards.

As proposed, the WWTF will discharge treated wastewater to land in the Plan Area. Therefore, development of the WWTF requires approval and issuance of a Waste Discharge Requirements permit from the Central Valley Regional Water Quality Control Board pursuant to California Water Code Section 13260.

3.3.4.5 ELECTRIC SERVICE

Jackson Ranch is within the service area of Pacific Gas & Electric (PG&E) and will be served by the existing electrical power lines onsite and abutting the northern Plan Area boundary. Specifically, existing power lines on the northern site boundary, abutting Utica Avenue; they also cross the central portion of the Plan Area from the northern to southern. New electrical transformers and switch stations will be located in key areas of the Plan Area to provide the necessary electric distribution infrastructure to serve Jackson Ranch. New electrical lines will be located within roadways and easements as appropriate and typical for new development. All proposed plans for electrical facilities and infrastructure will require coordination with and review by the County and PG&E, and will be implemented in accordance with all required guidelines and standards of PG&E.

3.3.4.6 NATURAL GAS

As with electricity and as an option, PG&E can provide natural gas service to the Plan Area through new regulator stations in key areas of the Plan Area that will connect to existing transmission pipelines offsite. As

an alternative, the project applicant/developer may utilize local gas providers to have tanks provided for the uses of the Plan Area. This option provides more flexibility and may be economically more suitable. If new underground gas mains are constructed, they will be located within roadways and easements as appropriate and typical for new development. All proposed plans for natural gas facilities and infrastructure will require coordination with and review by the County and PG&E (if provided by PG&E), and will be implemented in accordance with all required guidelines and standards of PG&E.

3.3.4.7 COMMUNICATION FACILITIES

A telecommunications network serving high speed data, voice, and video services will be provided for Jackson Ranch. This system will work with Incumbent Local Exchange Carriers and Competitive Local Exchange Carriers to provide Jackson Ranch with an advanced communication network. Local communications transmission and distribution facilities may be located in any land use area of the Specific Plan, and where feasible, lines will be located in underground easements or rights-of-way that permit access for maintenance with minimal disruption of surrounding properties.

3.3.4.8 SOLID WASTE

Solid waste generated in the Plan Area will be collected by Kings Waste and Recycling Authority (KWRA) and transferred to KWRA's Material Recovery Facility and Transfer Station at 7803 Hanford Armona Road in the City of Hanford. Some waste will be recycled at KWRA's facility prior to the remainder of the waste being disposed of at a state-licensed landfill in the region. Hazardous waste will be disposed of at Kettleman Hills Hazardous Waste Facility approximately four miles northwest of the Plan Area; the facility is managed and operated by Waste Management. Green waste will be disposed at the Kochergen Farms Composting Facility; the facility is managed and operated by Kochergen Farms Composting, Inc.

3.3.5 Project Phasing

As detailed in the Specific Plan, Jackson Ranch is anticipated to be developed in seven phases (described in detail below). It is anticipated that development of the first phase and its accompanying infrastructure improvements will occur soon after certification of the DEIR. For planning and financing purposes, development of the subsequent phases will occur in response to market demands. Phasing sequencing is subject to change over time to respond to various market and local factors and as such, phases may overlap or develop concurrently.

However, for purposes of this DEIR (including pertinent technical studies for air quality, greenhouse gas emissions, noise, and traffic), the impact analysis only considers two development phases: the first phase (Phase One described below) consists of buildout of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*, and the second phase (consists of Phases Two through Seven described below) consists of the portion of the Plan Area designated as Innovation Center (IC-JR) in Figure 3-4. As shown in Table 3-2, *Jackson Ranch Specific Plan Land Use Statistical Summary*, just under 2.4 million square feet of commercial/industrial space is planned for Jackson Ranch at buildout. Phase One will accommodate up to 161,125 square feet and Phase 2 will accommodate up to 2,236,628 square feet.

Additionally, for purposes of the environmental analysis, to analyze worst case conditions, buildout of Phase One is anticipated to occur in 2023 and buildout of Phase Two is anticipated to occur in 2040.

Development under each phase will be provided with the infrastructure and utilities systems needed to adequately serve the land uses of the phase in question. However, as described in Sections 3.3.3.1, *Mobility Plan*, 3.3.3.3, *Potable Water Management Plan*, and 3.3.3.4, *Wastewater Management Plan*, the Utica Avenue roadway improvements (including the roundabout), offsite water main, and onsite wastewater treatment facility will be constructed as needed to service Phase One of the Specific Plan and prior to or as a part of Phase One.

The phased impact analysis included in this DEIR is provided pursuant to CEQA Guidelines Sections 15126 and 15165. The analysis considers the environmental impacts of Phase One and Phase Two, full buildout of Specific Plan (or the "ultimate project" pursuant to Section 15165). Where necessary, a more detailed and site-specific analysis was undertaken in the DEIR for Phase One, with the conceptual site plan forming the basis for this level of analysis. For the second phase, a broader programmatic-level analysis was undertaken as no detailed site plan(s) have been developed at this time for this phase.

3.3.5.1 PHASE ONE

Phase one, encompassing approximately 27 acres, is anticipated to provide up to 161,125 square feet of travel-related commercial space. This phase will fill a need for travel-oriented services geared to meet the needs of existing travelers along I-5. Proposed uses include a 10-acre truck stop, potentially offering a restaurant, service station, and short term resting place for large transport vehicles. The remaining acreage has been divided into smaller parcels to easily accommodate fast food and sit down restaurants, motels, service stations, and an open area for community events.

The primary infrastructure (roads and accompanying wet and dry utilities) will be constructed prior to or at the same time as Phase One. Major vehicular access will be provided via Utica Avenue and the new alignment of 25th Avenue. The proposed offsite water main and the onsite wastewater treatment facility will also be completed prior to or at the same time as Phase One.

3.3.5.2 PHASE TWO

Phase two consists of approximately 13 acres and 235,000 square feet of commercial/industrial space in the Innovation Center designated area of the Specific Plan (see Figure 4). This designation allows for a range of uses, including light industrial, research and development, medical offices, hospitals, office, hospitality, retail, and entertainment. Development will be phased in a logical sequence in response to market demands. The primary access to Phase Two will be directly from Utica Avenue and interior local streets connected to 25th Avenue.

3.3.5.3 PHASES THREE THROUGH SEVEN

Combined, Phases Three to Seven consists of approximately 101 acres and 2 million square feet of commercial/industrial space in the Innovation Center designated area of the Specific Plan (see Figure 4). The Innovation Center designation allows for a range of uses, including light industrial, research and

development, medical offices, hospitals, office, hospitality, retail, and entertainment. Access to these phases will primarily be from local streets connected to 25th Avenue.

3.3.6 Required Actions and Approvals

With the exception of the development of a potential future air strip within the Air Strip Overlay designation, this DEIR is intended to serve as the primary environmental document for all future actions and approvals associated with the Specific Plan, including all discretionary and non-discretionary/ministerial actions and approvals requested or required to implement the Specific Plan. As noted earlier in this chapter, development of an air strip is not a part of the Specific Plan's project scope at this time, and therefore, is not analyzed in this DEIR. If the Air Strip Overlay is implemented in the future, additional environmental review pursuant to CEQA will be required to address the potential environmental impacts of developing an air strip.

3.3.6.1 DISCRETIONARY ACTIONS AND APPROVALS

A discretionary action is an action taken by a government agency that calls for an exercise of judgment in deciding whether to approve a project. Following is a list of the discretionary actions and approvals required by government agencies with oversight of the Specific Plan.

Lead Agency

A "lead agency" means the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment (CEQA Guidelines Section 15367 and Public Resources Code Section 21067). In the case of the Specific plan, Kings County is the lead agency. To implement the Specific Plan, the following discretionary actions and approvals are required by the County's approval body:

- Certification of the Jackson Ranch Specific Plan Environmental Impact Report
- Adoption of the Mitigation Monitoring and Reporting Program
- Adoption of the Jackson Ranch Specific Plan
- Adoption of a General Plan Amendment: General Plan Land Use Designation Change from General Agriculture-40 Acre to Jackson Ranch Specific Plan
- Adoption of a Development Code and Zoning District Map Amendments: Development Code Amendment to add the Jackson Ranch Specific Plan by reference and Zone District Map Amendment to change the zoning district from AG-40 to Jackson Ranch Specific Plan
- Approval of Vesting Tentative Parcel Map No. 2020-931

Responsible Agency

A responsible agency is a public agency other than the lead agency that has responsibility for carrying out or approving a project (CEQA Guidelines Section 15381 and Public Resources Code Section 21069). In the case of the Specific plan, LAFCO of Kings County is responsible lead agency. To implement the Specific Plan, the following discretionary actions and approvals are required by the Local Agency Formation Commission of Kings County:

- SOI Amendment to expand the KCCSD SOI to encompass the Plan Area

3.3.6.2 NON-DISCRETIONARY/MINISTERIAL ACTIONS AND APPROVALS

A non-discretionary or ministerial action are ones that require only conformance with a fixed standard or objective measurement and requires little or no personal judgment by a government agency as to the wisdom or manner of carrying out the action. Generally, non-discretionary or ministerial permits require a public official to determine only that the project conforms with applicable zoning and building code requirements and that applicable fees have been paid. Following is a list of the non-discretionary or ministerial actions and approvals required by government agencies with oversight of the Specific Plan.

Lead Agency

To implement the Specific Plan, the following non-discretionary/ministerial actions and approvals are required by the County:

- Approval and issuance of demolition, grading, and building permits and certificates of occupancy.
- Approvals for roadway, water, sewer, and storm drain infrastructure improvements in the public right-of-way.
- Approval of any roadway improvements and closures needed to implement the infrastructure improvements.

Responsible Agency

To implement the Specific Plan, the following non-discretionary/ministerial actions and approvals are required by pertinent government agencies:

- **California Department of Transportation.** Approval of any proposed improvements to or within Caltrans facilities and issuance of encroachment permits for any improvements within Caltrans right-of-way. Approval and issuance of permits for the potential installation of a water pipeline under I-5 at the 25th Avenue overpass or for any improvements required to the 25th Avenue/I-5 on-ramp and the intersection of these two roadway facilities.
- **Central Valley Regional Water Quality Control Board.** Issuance of a National Pollutant Discharge Elimination System (NPDES) Permit for construction activities.

- **Kettleman City Community Services District.** Approval for connection of the proposed water pipeline to the Kettleman City Surface Water Treatment Plant.
- **Local Agency Formation Commission of Kings County.** Approval of any Kettleman City Community Services District boundary or service extension that may be needed to serve the Specific Plan's potable water needs.
- **California Regional Water Quality Control Board Central Valley Region.** Approval and issuance of a Waste Discharge Requirements permit for the WWTF.

3.4 INTENDED USES OF THE EIR

This DEIR examines the environmental impacts of the Specific Plan. This DEIR also addresses various actions by the County and others to adopt and implement the Specific Plan. It is the intent of this DEIR to evaluate the environmental impacts of the Specific Plan, thereby enabling the County, other responsible agencies, and interested parties to make informed decisions with respect to the requested entitlements. The anticipated approvals required for the Specific Plan are describe above and summarized below.

Lead Agency	Action
Kings County	Certification of the Jackson Ranch Specific Plan Environmental Impact Report Adoption of the Mitigation Monitoring and Reporting Program Adoption of a General Plan Amendment Adoption of a Development Code and Zoning District Map Amendment Adoption of the Jackson Ranch Specific Plan Approval of Vesting Tentative Parcel Map No. 2020-931
Responsible Agencies	**Action**
California Department of Transportation.	Approval for any improvements to or work to be conducted in Caltrans right-of-way Issuance of encroachment permits
Central Valley Regional Water Quality Control Board.	Issuance of an NPDES Permit
Kettleman City Community Services District	Approval for installation of the off-site water main along 25th Avenue and for connection to the Kettleman City Surface Water Treatment Plant
Local Agency Formation Commission of Kings County.	Approval of a Kettleman City Community Services District (KCCSD) SOI Amendment and any KCCSD boundary or service extension for potable water
California Regional Water Quality Control Board Central Valley Region.	Approval and issuance of a Waste Discharge Requirements permit for the Wastewater Treatment Facility

4. Environmental Setting

4.1 INTRODUCTION

This section provides a "description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, ... from both a local and a regional perspective" (Guidelines § 15125[a]), pursuant to provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines The environmental setting provides the baseline physical conditions from which the lead agency will determine the significance of environmental impacts resulting from the proposed project. In addition, subsections of Chapter 5, *Environmental Analysis*, provide a more detailed description of the local environmental setting for specific topical areas.

4.2 REGIONAL ENVIRONMENTAL SETTING

4.2.1 Regional Location

Figure 3-1, *Regional Location*, shows the location of the area covered by the Specific Plan (Plan Area) within the regional context of Kings County (also referenced as County herein). Kings County is bordered by Fresno County to the north and west, Tulare County to the east, Kern County to the south, and San Luis Obispo County and Monterey County to the southwest. The Plan Area is in an unincorporated area of the County. The Plan Area is approximately 70 miles northwest of the City of Bakersfield and 70 miles southwest of the City of Fresno. The nearest urbanized area to the Plan Area is Kettleman City, an unincorporated community of the County approximately 6 miles to the northwest.

4.2.2 Regional Planning Considerations

4.2.2.1 KCAG REGIONAL TRANSPORTATION PLAN/SUSTAUNABLE COMMUNITIES STRATEGY

The Kings County Association of Governments (KCAG) is the metropolitan planning organization (MPO) for the Kings County region. KCAG's member agencies include the County and the cities of Avenal, Corcoran, Hanford, and Lemoore. As an MPO, KCAG serves as a pass-through agency for funding for local transportation projects. KCAG coordinates with other San Joaquin Valley MPOs on projects that are regional in nature.

The 2018 Kings County Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) covers the period from 2018 to 2042. The 2018 RTP/SCS provides the foundation for transportation decisions by local, regional, and state officials; documents the region's mobility needs and issues; identifies and attempts to resolve regional issues and provide policy and direction for local transportation plans; documents the region's goals, policies, and objectives for meeting current and future transportation mobility needs; sets forth an

action plan to address transportation issues and needs consistent with regional and state policies; identifies transportation improvements in sufficient detail to aid in the development of the State Transportation Improvement Program and to be useful in making decisions related to the development and growth of the region; identifies those agencies responsible for implementing action plans; and documents the region's financial resources needed to meet mobility needs.

Furthermore, Chapter 12, Sustainable Communities Strategy, of the 2018 RTP/SCS addresses Senate Bill 375 (SB 375) to show how the integration of land use and transportation planning can lead to lower emissions of greenhouse gases (GHG) from passenger vehicles and light duty trucks. SB 375 reinforces linkage between the Regional Housing Need Allocation and SCS process to better integrate housing, land use, and transportation planning. The SCS is a regional growth strategy that provides the basis for the integration of the land use decisions made by KCAG's member agencies and the transportation investments in the region with a goal of reducing the GHG emissions form cars and light trucks in the region; the SCS must be based on "current planning assumptions."

The Specific Plan's consistency with the applicable 2018 RTP/SCS policies is discussed in Section 5.8, *Land Use and Planning*.

4.2.2.2 SAN JOAQUIN VALLEY AIR BASIN AIR QUALITY ATTAINMENT PLANS

Kings County is in the San Joaquin Valley Air Basin (SJVAB), which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD). SJVAPCD has adopted several air quality attainment plans over the years that identify measures needed in the valley to attain the US Environmental Protection Agency's increasingly stringent National Air Quality Standards. SJVAPCD has implemented these plans and adopted over 600 rules that have resulted in significant emissions reductions. The SJVAB is designated nonattainment for ozone (O_3) and fine inhalable particulate matter ($PM_{2.5}$) under the California and National Ambient Air Quality Standards (AAQS) and nonattainment for coarse inhalable particulate matter (PM_{10}) under the California AAQS. The Specific Plan's consistency with the applicable AAQS is discussed in Section 5.2, *Air Quality*.

4.2.2.3 GREENHOUSE GAS EMISSIONS REDUCTION LEGISLATION

Current State of California guidance and goals for reductions in greenhouse gas (GHG) are generally embodied in Executive Order S-03-05; Assembly Bill 32 (AB 32), the Global Warming Solutions Act (2008); and SB 375, the Sustainable Communities and Climate Protection Act.

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent 1990 levels by 2050

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets

established in Executive Order S-03-05. KCAG explored various strategies that contribute to reducing GHG emissions in the following five categories: land use, mobility improvement, operational improvement, active transportation, and alternative fuel vehicles. KCAG has been able to show that its GHG emissions reductions would be 7.6 percent and 7.8 percent in 2020 and 2030, respectively, in the baseline scenario, which does not include off-model strategies, and 10.77 percent and 11.77 percent in 2020 and 2030, respectively, during the balanced solution, which includes off-model strategies.

The Specific Plan's ability to meet these regional GHG emissions reduction target goals is discussed in Section 5.6, *Greenhouse Gas Emissions*.

4.3 LOCAL ENVIRONMENTAL SETTING

4.3.1 Location and Land Use

4.3.1.1 PROJECT LOCATION

Figure 3-2, *Local Vicinity,* shows the Plan Area within its local context of Kings County. The Plan Area consists of approximately 415 acres in an unincorporated area of the County adjacent to and west of Interstate 5 (I-5) at the Utica Avenue off-ramp. As shown in Figure 3-2, Utica Avenue forms the northern Plan Area boundary, the southbound I-5 on-ramp forms the northeastern boundary, and I-5 forms the eastern boundary. A portion of the western Plan Area boundary abuts the California Aqueduct, and 25th Avenue bisects it from north to south. The Plan Area is accessed from I-5 via Utica Avenue.

4.3.1.2 EXISTING LAND USES

Onsite Uses

As shown in Figure 3-3, *Aerial Photograph,* land uses in the Plan Area primarily consist of active and fallow agricultural land or rangeland. The agricultural production consists mainly of irrigated crops such as almonds, pistachios, and stone fruits (apricots and plums); dry land grazing also occurs in the Plan Area. The Plan Area has historically been used for farming, and portions presently contain an orchard of almond trees near the end of their productive life expectancy. A portion of the Plan Area consists of disked lands formerly planted as orchards. Power lines on wooden poles line the northern site boundary, abutting Utica Avenue; they also traverse the entire stretch of the central Plan Area from the northern to southern boundary.

Surrounding Land Uses

As shown in Figure 3-3, surrounding land uses primarily consist of active and fallow agricultural land or grazing lands. Major infrastructure surrounding the Plan Area includes I-5 to the east and the California Aqueduct to the west. Beyond the aqueduct are the Kettleman Hills.

4.3.1.3 EXISTING GENERAL PLAN AND ZONING

The current Kings County General Plan, which was adopted on January 26, 2010, designates all parts of the Plan Area under General Agriculture-40 Acre. This designation is applied to rural areas of the County and allows intensive agricultural uses that, by their nature, may be incompatible with urban uses.

Table 4-1 presents a breakdown of the current Kings County General Plan land use designations in the County. As shown in Table 4-1, the County is currently divided into six land use designations, and the predominant land use is agriculture, comprising approximately 90 percent of land in the County.

Table 4-1 Current General Plan Land Use Designations

General Plan Land Use Designation	Compatible Zoning District Abbreviation	Acres[1]	Percentage of Total Land Use
Agriculture	**A**	**738,623.04**	**90.18%**
Limited Agricultural	AL-10	22756.74	
General Agriculture – 20 Acre	AG-20	149,333.62	
General Agriculture – 40 Acre	AG-40	522,264.85	
Exclusive Agriculture – 40 Acre	AX	44,267.73	
Residential	**R**	**3,073.10**	**0.36%**
Very Low Density	RRE/RRA	1,073.99	
Low Density	R-1-20	324.19	
Low Medium Density	R-1-12	163.12	
Medium Density	R-1-8 or R-1-6	667.5	
Medium High Density	RM-3	226.39	
High Density	RM-2	83.31	
Very High Density	RM-1.5	15.18	
Reserve Low Medium Density	R(R)	53.13	
Reserve Medium Density	R(R)	278.82	
Reserve Medium High Density	R(R)	33.95	
Mixed Use	**MU**	**158.72**	**0.02%**
Downtown Mixed Use	MU-D	38.27	
Mixed Use	MU	86.23	
Reserve Mixed Use	MU(R)	34.22	
Commercial	**C**	**813.36**	**0.10%**
Neighborhood Commercial	CN	14.59	
Rural Commercial	CR	133.83	
Service Commercial	CS	274.59	
Transportation Commercial	CT, CH	210.60	
Multiple Commercial	CS, CH	135.74	
Reserve Multiple Commercial	C(R)	44.01	
Industrial	**I**	**1,540.88**	**0.31%**
Light Industrial	IL	507.54	
Heavy Industrial	IH	2,033.34	
Planned Industrial	IP	0.00	

Table 4-1 Current General Plan Land Use Designations

General Plan Land Use Designation	Compatible Zoning District Abbreviation	Acres[1]	Percentage of Total Land Use
Other Uses	**527**	**73,940.53**	**9.03%**
Overlay Districts	DD, NS, AC, OS, NRC, FH, RM, SD, CR	72,798.75	
Public	PF	1,141.78	
Total	**—**	**818,996.11**	**100%**

[1] Source: 2010 Kings County General Plan.

The County's Development Code regulates the uses of land and structures within the unincorporated areas of Kings County by establishing zoning designations and development requirements and procedures. The County-designated zoning district of the Plan Area is AG-40 (General Agriculture-40 District). This district is intended primarily for application to rural areas of the County, which are generally characterized by extensive and intensive agricultural uses of land. The AG-40 zoning district allows for a variety of agricultural, residential, energy, public utilities, and miscellaneous uses by-right or with a site plan review, conditional use permit, or temporary land use permit.

The Plan Area also has a Dairy Development Overlay Zone (DDOZ). As established in the General Plan Dairy Element, the DDOZ designates those portions of the County where the majority of the dairies in the County exist and where new dairies may be located. The DDOZ allows for the development of new dairies and the expansion of existing dairies in accordance with the specific requirements and standards contained in the General Plan Dairy Element of the General Plan and County's Application Guidelines for New and Expanding Dairy Permits, and as permitted by the underlying zoning designation.

4.3.2 Agriculture Resources

The Plan Area primarily consists of active and fallow agricultural land or rangeland (grazing land), and agricultural production consists mainly of irrigated crops such as almonds, pistachios, and stone fruit (apricots and plums). Dry land grazing activities also occur in the Plan Area (see Figure 3-3, *Aerial Photograph*). The Plan Area has historically been and is currently being used for farming; portions of the Plan Area presently contain an orchard of almond trees near the end of their productive life expectancy. Moreover, a portion of the Plan Area consists of disked lands formerly planted as orchards.

Refer to Section 5.1, *Agriculture and Forestry Resources,* for additional information regarding the Plan Area's agricultural resources and an analysis of project-related impacts to those resources.

4.3.3 Air Quality

The Plan Area is in the central portion of the SJVAB. The SJVAB consists of eight counties: Fresno, Kern (western and central), Kings, Tulare, Madera, Merced, San Joaquin, and Stanislaus. The SJVAB is approximately 250 miles long and an average of 35 miles wide, and is bordered by the Sierra Nevada to the east, the Coast Ranges in the west, and Tehachapi mountains in the south. The SJVAB is in a Mediterranean

climate zone which is characterized by sparse rainfall, which occurs mainly in winter; summers are hot and dry. The SJVAB is designated nonattainment for ozone (O_3) and fine inhalable particulate matter ($PM_{2.5}$) under the California and National Ambient Air Quality Standards (AAQS) and nonattainment for coarse inhalable particulate matter (PM_{10}) under the California AAQS.

An air quality analysis was performed for development that would be accommodated by the Specific Plan, and the results are discussed in Section 5.2, *Air Quality*.

4.3.4 Biological Resources

The Plan Area has been disturbed from its natural state due to the agricultural uses that have occurred in the Plan Area over the years. As shown in Figure 3-3, the Plan Area is dominated by active and fallow agricultural land. The Plan Area is not within or adjacent to any USFWS-designated critical habitat, and jurisdictional features, hydric soils, or wetlands are not present within the Plan Area. There are no native vegetation communities onsite and plant species in the Plan Area are typical of the fallow and active agricultural land present within the Plan Area. Due to the long agricultural history of the Plan Area and the lack of suitable habitat for the special-status plant species, it is presumed that there are no special-status plant species onsite.

Refer to Section 5.3, *Biological Resources*, for additional information regarding the Plan Area's biological resources and an analysis of project-related impacts to those resources.

4.3.5 Cultural, Paleontological, and Tribal Cultural Resources

A search of the Sacred Lands File by the Native American Heritage Commission did not identify any previously known sensitive or sacred Native American resources within the Plan Area. A cultural records search indicated that seven cultural resources investigations were conducted within a one-mile search radius of the Plan Area between 1987 and 2017. Four of these investigations overlap the Plan Area and the records search also indicated that one cultural resource, the California Aqueduct which abuts the western boundary of the Plan Area was previously recorded within the one-mile search radius. However, no cultural resources were previously recorded in the Plan Area.

The Natural History Museum of Los Angeles County conducted a thorough search of their paleontology collection records for the locality and specimen data for the Plan Area. Based on their findings, no vertebrate fossil localities were found to lie directly within the Plan Area.

Refer to Sections 5.4, *Cultural Resources,* 5.5, *Geology and Soils,* and 5.12, *Tribal Cultural Resources,* for further analysis on cultural, paleontological, and tribal cultural resources, respectively.

4.3.6 Greenhouse Gas Emissions

The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that

contribute to global warming to a lesser extent are nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.

In 2019, the statewide GHG emissions inventory was updated for 2000 to 2017 emissions using the global warming potential (GWP) in IPCC's Fourth Assessment Report. Based on these GWPs, California produced 424.10 $MMTCO_2e$ GHG emissions in 2017. California's transportation sector was the single largest generator of GHG emissions, producing 40.1 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.7 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (9.7 percent), agriculture and forestry (7.6 percent), high GWP (4.7 percent), and recycling and waste (2.1 percent).

California's GHG emissions have followed a declining trend since 2007. In 2017, emissions from routine GHG-emitting activities statewide were 424 $MMTCO_2e$, 5 $MMTCO_2e$ lower than 2016 levels. This represents an overall decrease of 14 percent since peak levels in 2004 and 7 $MMTCO_2e$ below the 1990 level and the state's 2020 GHG target. During 2000 to 2017 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 $MTCO_2e$ per capita to 10.7 $MTCO_23$ per capital in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining, representing a 41 percent decline since the 2001 peak, while the state's GDP has grown 52 percent during this period. For the first time since California started to track GHG emissions, California uses more electricity from zero-GHG sources (hydro, solar, wind, and nuclear energy).

Refer to Section 5.6, *Greenhouse Gas Emissions,* for additional information related to GHGs and an analysis of project-related impacts to GHG emissions.

4.3.7 Hydrology and Water Quality

The Plan Area is in the Tulare Lake Subbasin of the San Joaquin Valley Groundwater Basin (Basin). The Basin lies within the San Joaquin River and Tulare Lake Hydrologic Regions—it is surrounded on the west by the Coast Ranges, on the south by the San Emigdio and Tehachapi Mountains, on the east by the Sierra Nevada, and on the north by the Sacramento-San Joaquin Delta and Sacramento Valley. The northern portion of the Basin is within the San Joaquin River HR and consists of nine subbasins. The southern portion of the Basin lies in the Tulare Lake HR and consists of seven groundwater subbasins. The Tulare Lake Subbasin is mostly within Kings County, with small portions in Tulare County and Kern County, and covers approximately 837 square miles.

No streams, rivers or other water bodies lie within or traverse the Plan Area. There are also no existing drainage features or improvements within the Plan Area as the land uses in the Plan Area primarily consist of active and fallow agricultural land or rangeland. As shown in Figure 3-3, *Aerial Photograph*, the nearest drainage feature is the California Aqueduct, which abuts the western Plan Area boundary. The aqueduct is owned by the California Department of Water Resources (CDWR) and maintained by CDWR's Division of Operations and Maintenance.

Refer to Section 5.7, *Hydrology and Water Quality,* for additional information regarding hydrological conditions and an analysis of project impacts on hydrology and water quality.

4.3.8 Noise

As shown in Figure 3-3, *Aerial Photograph*, the Plan Area and its surroundings consists primarily of active and fallow agricultural land or grazing land. Utica Avenue forms the northern Pan Area boundary and I-5 abuts the eastern boundary. Noise levels in the area are influenced primarily by vehicular traffic on I-5 and to a lesser extent by activity (e.g., tractor trailers, generators, farming, and maintenance equipment) of existing agricultural uses.

See Section 5.9, *Noise,* for additional information concerning the noise environment and an analysis of project-related noise impacts.

4.3.9 Public Services and Utilities and Service Systems

Public services and utilities are or would be provided to the Plan Area as listed in Table 4-2.

Table 4-2 Public Service and Utility Providers

Public Services	
Police	Kings County Sheriff's Office and California Highway Patrol
Fire Protection and Emergency Medical Services	Kings County Fire Department
Utilities and Service Systems	
Water	**Non-Agricultural Uses** Kettleman City Community Services District via pipeline connection to the Kettleman City Surface Water Treatment Plant **Agricultural Uses (Irrigation)** Dudley Ridge Water District via State Water Project water from the adjacent California Aqueduct.
Wastewater Treatment	Proposed Wastewater Treatment Plant in northwestern portion of the Plan Area
Solid Waste Collection	Kings Waste and Recycling Authority (KWRA)
Waste Disposal	
Green Waste Disposal	Kochergen Farms Composting Facility
Hazardous Waste Disposal	Kettleman Hills Hazardous Waste Facility
Solid Waste Disposal	KWRA's Material Recovery Facility and Transfer Station
Electricity	Pacific Gas & Electric
Natural Gas	Pacific Gas & Electric or local gas providers via tanks

Refer to Sections 5.10, *Public Services*, and 5.13, *Utilities and Service Systems*, for additional information regarding public services and utilities and service systems, respectively, and an analysis of project-related impacts on public services and utilities.

4.3.10 Transportation

The Plan Area is adjacent to and west of I-5 at the Utica Avenue off-ramp. Utica Avenue forms the northern Plan Area boundary, the southbound I-5 on-ramp forms the northeastern boundary, and I-5 forms the eastern boundary; 25th Avenue bisects the Plan Area from north to south (see Figure 3-3, *Aerial Photograph*). The Plan Area is accessed from I-5 via Utica Avenue, a two-lane Local Street with a 90-foot right-of-way. Outside of the vicinity of the Plan Area, Utica Avenue is designated by the Kings County General Plan Circulation Element as a Major Collector from the east side of I-5 to 6th Avenue, and for the portion west of the Plan Area where State Route 33 (SR-33) and SR-41 are connected. The Kings County Area Public Transit Agency (KCAPTA) oversees the operations of local transit providers.

Refer to Section 5.11, *Transportation,* for additional information concerning existing transportation facilities and traffic conditions, as well as an analysis of project-related impacts.

4.4 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

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

The CEQA Guidelines (Section 15130 [b][1]) state that the information utilized in an analysis of cumulative impacts should come from one of two sources:

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

B. A summary of projections contained in an adopted General Plan or related planning document designed to evaluate regional or area-wide conditions.

The cumulative impact analysis in this DEIR uses Method B. The Kings County General Plan and Land Use Element were adopted by the Kings County Board of Supervisors on January 26, 2010. Cumulative impact analyses will use the projections in the Kings County General Plan and other long-range planning documents, such as KCAG's 2018–2042 RTP/SCS for land use and planning.

Some impacts are site specific, such as cultural resources, and others may have impacts outside the County's boundaries, such as regional air quality. Please refer to Chapter 5, *Environmental Analysis*, of this DEIR for a discussion of the cumulative impacts associated with development and growth in the County and region for each environmental resource area.

Cumulative impact analyses for several topical sections are also based on the most appropriate geographic boundary for the respective impact. Several potential cumulative impacts that encompass regional boundaries

(e.g., air quality and traffic) have been addressed in the context of various regional plans and defined significance thresholds. Climate change is a global issue, and the cumulative impacts analysis has been addressed in the context of state regulations and regional plans designed to address the global cumulative impact. The following is a summary of the approach and extent of cumulative impacts, which are further detailed in each environmental topical section:

- **Agricultural Resources.** Agricultural impacts are assessed relative to federal, state, and local agricultural resource regulations.
- **Air Quality.** Air quality impacts are based on the regional boundaries of the SJVAB.
- **Biological Resources.** Regional evaluation considering regional habitat loss, protected species, and wildlife corridors, based primarily upon the San Joaquin Valley area.
- **Cultural Resources.** Cultural resources impacts are site specific and generally do not combine to result in cumulative impacts. The cumulative impact of cultural resources includes the project site and immediate surrounding area.
- **Geology and Soils.** Geologic and soils impacts are site specific and generally do not combine to result in cumulative results.
- **Greenhouse Gas (GHG) Emissions.** Potential GHG impacts are not bounded by geography but affect global climate change. The assessment of cumulative GHG impacts, therefore, is based on consistency with regional plans and per-capita GHG reduction thresholds to achieve targeted reductions.
- **Hydrology and Water Quality. W**ater quality impacts are based on potential cumulative impacts on the San Joaquin Valley Groundwater Basin.
- **Land Use and Planning.** Cumulative analysis is based on applicable jurisdictional boundaries and related plans, including regional land use planning based on KCAG.
- **Noise.** Cumulative traffic noise is assessed relative to applicable noise-level standards. The study area for noise is aligned with the traffic study area.
- **Public Services.** Cumulative impacts are based on potential related development within the applicable service provider boundaries and assessed relative to applicable plans and projections.
- **Transportation.** The traffic study considers project-specific impacts and the project's cumulative contribution to traffic in the project vicinity. To assess cumulative traffic conditions, existing traffic is combined with project trips and regional ambient growth.
- **Tribal Cultural Resources.** Considers Native American territory that include the Plan Area.
- **Utilities and Service Systems.** Water supply for the Plan Area would come from the State Water Project and the Kern River Water Bank, and water treatment would occur at the Kettleman City Surface

Water Treatment Plant. Wastewater treatment would occur in the Plan Area via a wastewater treatment plant. Cumulative impacts related to stormwater drainage would be contiguous with the San Joaquin Valley Groundwater Basin and the Central Valley Regional Water Quality Control Board service area. Solid waste collection and disposal services would be contiguous with the County. Natural gas and electricity services would be contiguous with Pacific Gas & Electric service area.

4. Environmental Setting

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5. Environmental Analysis

Chapter 5 examines the environmental setting of the proposed project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter has a separate section for each environmental issue area that was determined to need further study in this DEIR. This scope was determined in the Initial Study and notice of preparation (NOP), which were published August 29, 2019 (see Appendix A), and through public and agency comments received during the NOP comment period from August 29 to September 30, 2019 (see Appendix B). Environmental issues and their corresponding sections are:

- 5.1 Agricultural and Forestry Resources
- 5.2 Air Quality
- 5.3 Biological Resources
- 5.4 Cultural Resources
- 5.5 Geology and Soils
- 5.6 Greenhouse Gas Emissions
- 5.7 Hydrology and Water Quality
- 5.8 Land Use and Planning
- 5.9 Noise
- 5.10 Public Services
- 5.11 Transportation
- 5.12 Tribal Cultural Resources
- 5.13 Utilities and Service

Sections 5.1 through 5.13 provide a detailed discussion of the environmental setting, impacts associated with the proposed project, and mitigation measures designed to reduce significant impacts where required and when feasible. Where necessary, the residual impacts following the implementation of any mitigation measure are also discussed.

The Initial Study also determined that environmental topics and specific issues under some of the environmental topics would not be significantly affected by implementation of the project; these issues are not discussed further in this DEIR. Refer to Chapter 8, *Impacts Found Not To Be Significant*, for a summary of and further discussion regarding impacts that were found to have no significant impact.

Organization of Environmental Analysis

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

- Environmental Setting

5. Environmental Analysis

- Thresholds of Significance
- Environmental Impacts
- Cumulative Impacts
- Existing Regulations
- Level of Significance Before Mitigation
- Mitigation Measures
- Level of Significance After Mitigation
- References

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

Terminology Used in This Draft EIR

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

- **No impact.** The project would not change the environment.
- **Less than significant.** The project would not cause any substantial, adverse change in the environment.
- **Less than significant with mitigation incorporated.** The DEIR includes mitigation measures that avoid substantial adverse impacts on the environment.
- **Significant and unavoidable.** The project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less than significant level.

5.1 AGRICULTURE AND FORESTRY RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Jackson Ranch Specific Plan (Specific Plan) to impact agriculture and forestry resources in unincorporated Kings County—specifically, the area covered by the Specific Plan (Plan Area) and its surroundings. The analysis is based, in part, on the California Department of Conservation's Farmland Mapping and Monitoring Program and 2035 Kings County General Plan.

5.1.1 Environmental Setting

5.1.1.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, or guidelines related to agricultural resources that are applicable to the Specific Plan are summarized below.

Federal

Farmland Protection and Policy Act

The Farmland Protection and Policy Act (FPPA) was designed to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to non-agricultural uses. This Act assures that to the extent possible, federal programs are administered to be compatible to with state, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. This Act does not authorize the federal government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners. For the purposes of the act, "farmland" includes prime farmland, unique farmland, and farmland of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland, it can be forestland, pastureland, cropland, or other land, but not water or urban/built-up land.

State

Farmland Mapping and Monitoring Program

With the California Natural Resources Agency, the California Department of Conservation, Division of Land Resource Protection (DLRP) provides services and information that promote informed land use decisions and sound management of the state's natural resources. DLRP manages the Farmland Mapping and Monitoring Program (FMMP), which supports agriculture throughout California by developing maps and statistical data for analyzing land use impacts to farmland. The FMMP is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California.

The developed maps are called the Important Farmlands Inventory (IFI). The IFI categorizes land based on the productive capabilities of the land. There are many factors that determine the agricultural value of land, including the suitability of soils for agricultural use, whether soils are irrigated, the depth of soil, water-

holding capacity, and physical and chemical characteristics. To categorize soil capabilities, two soil classification systems are used: the Capability Classification System and the Storie Index. The Capability Classification System categorizes soils from Class I to Class VII based on their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time (Class I soils have few limitations for agriculture; Class VIII soils are unsuitable for agriculture) (NRCS 1992). The Storie Index takes into account other factors, such as slope and texture.

FMMP rates the production potential of agricultural land according to the following classifications:

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

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

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

- **Farmland of Local Importance** is land that is important to the local agricultural economy. It is determined by each county's board of supervisors and a local advisory committee.

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

- **Urban and Built-Up Land** is occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.

- **Other Land** is land not included in any other mapping category. Common examples include low density rural developments; wetlands and riparian areas not suitable for livestock grazing; confined livestock, poultry, and aquaculture facilities; and strip mines. Vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as other land. The Rural Land Mapping Project provides more detail on the distribution of various land uses within the Other Land category in all eight San Joaquin Valley counties. The Rural Land categories include: Rural Residential Land, Semi-Agricultural and Rural Commercial Land, Vacant or Disturbed Land, Confined Animal Agriculture, and Non-agricultural or Natural Vegetation.

- **Water** is used to describe perennial water bodies with an extent of at least 40 acres.

Note that CEQA analysis focuses on impacts to three categories of mapped important farmland—Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. In this section, the term "mapped important farmland" refers to these three categories of farmland combined.

California Land Conservation Act (Williamson Act)

The California Land Conservation Act, or Williamson Act, was adopted in 1965 (California Government Code §§ 51200 et. seq.). The act was established to encourage the preservation of agricultural lands in view of the increasing trend toward their "premature and unnecessary" urbanization. The act enables counties and cities to designate agricultural preserves (Williamson Act lands) and offer preferential taxation to agricultural landowners based on the land's income-producing value. In return for the preferential tax rate, the landowner is required to sign a contract (Williamson contract) with the county or city agreeing not to develop the land for a minimum of 10 years. The contract is renewed automatically on its anniversary date unless a notice of nonrenewal or petition for cancellation is filed.

Farmland Security Zone Contract

A Farmland Security Zone Contract is a 20-year evergreen contract that has similar restrictions as Williamson Act Contracts for land use. In recognition of the longer term, Farmland Security Zones offer landowners greater property tax reduction. Land restricted by a farmland security zone contract is valued for property assessment purposes at 65 percent of its Williamson Act restricted valuation, or 65 percent of its Proposition 13 valuation, whichever is lower.

California Government Code Section 56064

This section of the California Government Code defines "Prime Agricultural Land" as follows:

- Prime agricultural land means an area of land, whether single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:
- Land that qualifies, if irrigated, for rating as class I or class II in the United States Department of Agriculture (USDA) Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
- Land that qualifies for rating 80 through 100 Storie Index Rating.
- Land that supports livestock used for the production of food and fiber that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the USDA in the National Range and Pasture Handbook, Revision 1, December 2003.
- Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than $400.00 dollars per acre.
- Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than $400.00 dollars per acre for three of the previous five calendar years.

Local

Kings County Code of Ordinances

Section 14-38 (Agricultural Land Use Protection) of Chapter 14 (Health and Welfare) of the Kings County Code of Ordinances calls for the protection of agricultural land, operations, and facilities from conflicting uses due to the encroachment of incompatible, non-agricultural uses of the land in agricultural areas of the County, and to advise developers, owners, and subsequent purchasers of property in the County of the inherent potential inconveniences and discomforts often associated with agricultural activities and operations.

Kings County Development Code

Article 4 (Agricultural Zoning Districts) of the Kings County Development Code indicates that the purpose of the Agricultural (A) Districts is to preserve land best suited for agriculture from the encroachment of incompatible uses in order that commercial agricultural operations may continue in a manner customary in the agricultural industry. The Agricultural (A) Districts are also intended to prevent the intrusion of urban development into agricultural areas in such a manner as to make agricultural production uneconomical or impractical, to preserve in agricultural use land suited to eventual development in other uses until such time as streets, utilities, and other community facilities may be provided or programmed as to ensure the orderly and beneficial conversion of these lands to non-agricultural use; to provide appropriate areas for certain predominantly open uses of land which are not injurious to agricultural uses but which may not be harmonious with urban uses; to provide appropriate locations for certain types of establishments primarily serving agricultural producers; to permit the application of regulations to major agricultural areas of the County which will reflect basic physical differences and attractions among such areas.

2035 Kings County General Plan

The Resource Conservation Element of the Kings County General Plan includes various goals, objectives, and policies to ensure the protection and productivity of agricultural lands in the County, which include:

- **RC Goal B1.** Maintain viable and productive agricultural land within the County and ensure the long term preservation of the County's agricultural resources continue to provide a sustainable food supply and supports a vibrant local agricultural economy.
    - **RC Objective B1.1.** Identify the County's highest priority agricultural lands that are critical to the County's agricultural economy, prime soils, and water availability, and emphasize higher preservation efforts for these areas.
    - **RC Objective B1.3.** Balance the long term preservation of the County's agricultural resources with areas planned to accommodate urban growth within Cities and Community Districts, and prioritize the creation of Farmland Security Zone contracts on land outside the Blueprint Urban Growth Boundaries as defined by the Kings County Association of Governments to ensure long term preservation of the County's vital agricultural resources in areas not planned to accommodate future projected urban growth.

Moreover, the Resource Conservation Element of the Kings County General Plan protects the rights of operators or productive agricultural properties to commence and continue their agricultural practices even though established urban uses in the general area may foster complaints against those agricultural practices. The following requirements pertain to the "Right to Farm" policy in the Plan Area:

- The agricultural activity is conducted in a manner consistent with proper and accepted customs and standards as established and followed by similar agricultural operations in the same locality.
- The "right to farm" policy encompass the processing of agricultural products and other activities inherent in the definition of productive agriculture.
- All parcel maps, zoning permits and residential building permits approved in Kings County include a condition that the property owner sign and record notice and disclosure of this agricultural land use (Right to Farm) policy.

Similarly, the Land Use Element of the Kings County General Plan contains goals, objectives, and policies that pertain to the protection of agricultural lands as follows:

- **LU Goal B1:** Protect agricultural lands throughout the County, and in particular along the edges of community districts and Urban Fringe by maintaining large parcel sizes and preventing the premature development of incompatible urban uses.
  - **LU Objective B1.1.** Preserve the integrity of the County's agricultural land resources through agricultural land use designations and other long term preservation policies.
  - **LU Objective B1.2.** Maintain large parcel sizes of agricultural designated land within Urban Fringe areas and around Community Districts to retain viable agricultural production until such time as land is planned and ready for conversion to other uses.
- **LU Goal B2:** Agricultural production continues to be supported and enhanced in areas designated for agriculture, while conflicts between agriculture and non-agricultural uses are minimized.
  - **LU Objective B2.1.** Recognize agriculture as the highest and best use of agricultural designated land, preserve the right of farmers and agricultural operations to continue customary and usual agricultural practices, and operate in the most efficient manner possible.
  - **LU Objective B2.2.** Minimize and reduce the potential for conflicts between agriculture and non-agricultural urban uses.
  - **LU Objective B2.3.** Increase diversified business opportunities within agricultural areas when they are compatible with agricultural operations.
- **LU Goal B3:** Allow agricultural support services within areas designated General Agriculture.

- **LU Objective B3.1.** Direct agricultural support services to General Agriculture land use designated areas, while ensuring that services are not harmful to the long term agricultural use of the land or potential future urban growth if within the Blueprint Urban Growth Boundary.

- **LU Goal B7.** Community benefiting non-agricultural uses remain compatible within the County's Agriculture Open Space area, and are supported for their continued operation and existence.

  - **LU Objective B7.1.** Allow compatible Open Space and Public uses of land within the Agriculture Open Space area of the County.

5.1.1.2 EXISTING CONDITIONS

Agricultural Uses

Agricultural uses in the Plan Area primarily consist of active and fallow agricultural land or rangeland (grazing land), and agricultural production mainly consists of irrigated crops such as almonds, pistachios, and stone fruit (apricots and plums). Dry land grazing activities also occur in the Plan Area (see Figure 3-3, *Aerial Photograph*). The Plan Area has historically been and is currently being used for farming; portions of the Plan Area presently contain an orchard of almond trees near the end of their productive life expectancy. Moreover, a portion of the Plan Area consists of disked lands formerly planted as orchards. Much of the Plan Area has been in agricultural use since at least 2005, as shown on historical aerial photographs, and land next to the southwest site boundary has been in agricultural use since at least 1994. The southern part of the Plan Area is shown in agricultural use on topographic maps dates 1956 and 1976 (NETR 2019).

Furthermore, similar to the Plan Area and as shown in Figure 3-3, surrounding land uses primarily consist of active and fallow agricultural land or grazing lands.

Agricultural Designations and Contracts

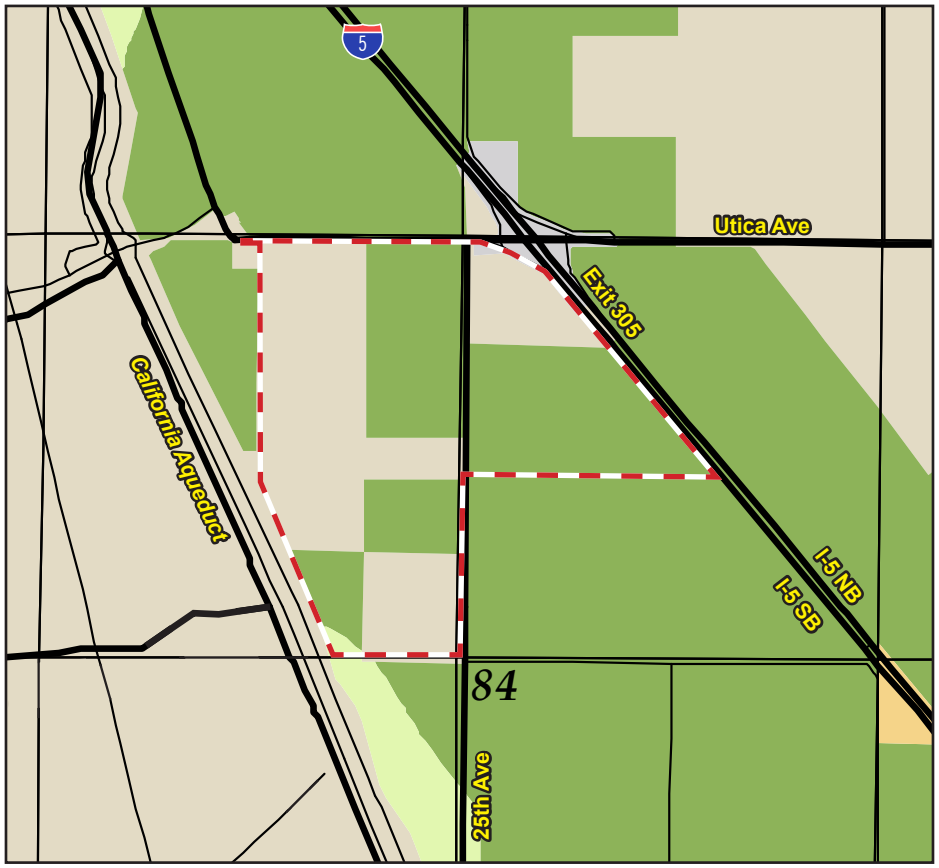
According to the Kings County General Plan, approximately 90 percent, or 738,623 acres, of land in the County is designated agricultural. The Plan Area is designated General Agriculture-40 Acre and the zoning designation of the Plan Area is General Agriculture-40 District (AG-40).

Figure 5.1-1, *Important Farmland Designations*, illustrates the farmland designations of the Plan Area pursuant to DLRP's Farmland Mapping and Monitoring Program. DLRP designates approximately 46 percent (190 acres) of land in the 415-acre -Plan Area as "Grazing Land" and approximately 52 percent (215 acres) is designated as "Prime Farmland". A small area (approximately 10 acres) in the southwestern portion of the Plan Area adjacent to the California Aqueduct is designated as "Unique Farmland". Grazing Land is land on which the existing vegetation is suited for grazing of livestock. The Prime Farmland designation means that active farming has occurred within the past four years and indicates that the Plan Area is able to sustain long-term agricultural production because it offers the soil quality, growing season, and water supply to produce sustained high yields. Unique Farmland consists of lesser-quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards (DLRP 2019).

Figure 5.1-1 - Important Farmland Designations

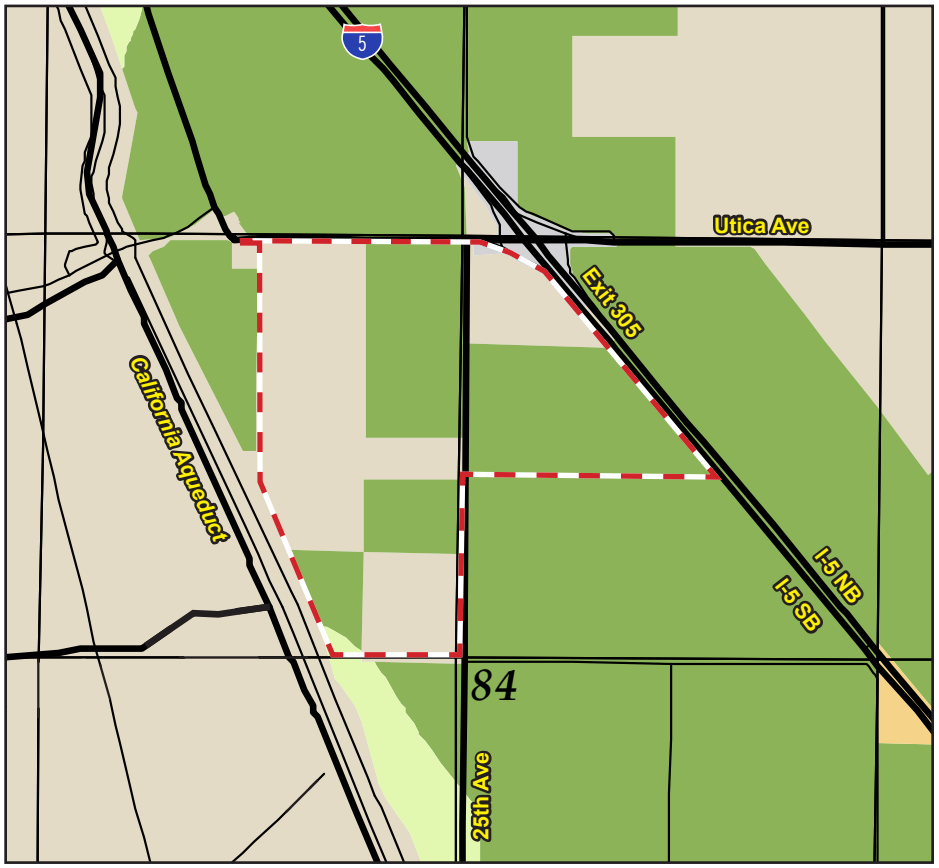
5. Environmental Analysis

California Department of Conservation



Plan Area Boundary
Prime Farmland
Unique Farmland
Grazing Land

King's County General Plan



Plan Area Boundary
Prime Farmland (California Department of Conservation Designated)
Prime Farmland (Kings County Assessor Designated)
Grazing Land (California Department of Conservation Designated)

0 2,000
Scale (Feet)

Source: DLRP, 2019; Kings County, 2009

5. Environmental Analysis
AGRICULTURE AND FORESTRY RESOURCES

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Figure 5.1-1 also illustrates the important farmland designations of the Plan Area pursuant to Figure RC-10 (Prime Farmland) of the King's County General Plan Resource Conservation Element, which includes designations from DLRP and the Kings County Assessor's Office (KCAO). As shown in Figure 5.1-1, the farmland designations are similar to those of DLRP's Farmland Mapping and Monitoring Program, with the exception of the 10-acre area in the southwestern portion of the Plan Area adjacent to the California Aqueduct. Pursuant to Figure RC-10, this area is designated as "Prime Farmland" per KCAO. KCAO defines Prime Farmland primarily according to assessed crop value, which serves as the basis for the County's annual Open Space Subvention Act report to the state. This report is the County's subvention funding request to the state related to the County's implementation of the Williamson Act and Farmland Security Zone contracts.

The Plan Area is not currently enrolled in a Williamson Act or Farmland Security Zone Contract.

5.1.2 Thresholds of Significance

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

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

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

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

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

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

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would have no impact or would be less than significant:

- Threshold AG-2
- Threshold AG-3
- Threshold AG-4
- Threshold AG-5

These impacts will not be addressed in the following analysis.

5.1.3 Environmental Impacts

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

Impact 5.1-1: Implementation of the Specific Plan would convert mapped important farmland to non-agricultural uses. [Threshold AG-1]

Impact Analysis. DLRP's Farmland Mapping and Monitoring Program is charged with producing maps for analyzing impacts on the state's agricultural resources. California's agricultural lands are rated based on soil quality and irrigation status. The classification system is contiguous with US Department of Agriculture soil surveys and current land use. These maps are updated every two years, with the most recent data being from 2016. For CEQA purposes and the analysis provided herein, the following categories are qualified as "agricultural land:" Prime Farmland, Farmland of Statewide Importance, and Unique Farmland (Public Resource Code Section 21060.1; DLRP 2019). Prime Farmland has the highest value of three categories of mapped important farmland analyzed under CEQA.

Following is a discussion of the potential impacts to mapped important farmland as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

The Plan Area has historically been and is currently being used for agricultural purposes. As shown in Figure 5.1-1, *Important Farmland Designations*, DLRP designates approximately 46 percent (190 acres) of the 415-acre Plan Area as "Grazing Land" and approximately 52 percent (215 acres) as "Prime Farmland". A small area (approximately 10 acres) in the southwestern portion of the Plan Area adjacent to the California Aqueduct is designated as "Unique Farmland". Additionally, the Kings County General Plan designates the Plan Area as General Agriculture-40 Acre and the zoning designation is General Agriculture-40 District (AG-40).

Although the entire 415-acre Plan Area is designated for agricultural uses, currently, approximately 154 acres is used for agricultural purposes and is in agricultural production (orchards). The remainder of the Plan Area is not currently in agriculture production; it consists of fallow agricultural land or grazing land (see Figure 3-3, *Aerial Photograph*).

Implementation of the Specific Plan would convert approximately 141 acres (comprising the areas designated as Innovation Center and Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*) designated by DLRP as Prime Farmland and Grazing Land to non-agricultural uses. Of the 141 acres, approximately 85 acres (entirely designated as Prime Farmland) are currently being used for agricultural purposes (orchards) with the remainder being fallow agricultural land or grazing land. However, the orchards that would be removed to accommodate development under the Specific Plan are near the end of their productive life expectancy and would not be replaced. Also, approximately 69 acres of the Plan Area (entirely designated as

Prime Farmland) would remain in agricultural production (orchards). The 10 acres in the southwestern portion of the Plan Area designated as Unique Farmland would also be designated for future agricultural uses, as discussed below. Additionally, under the Specific Plan, approximately 141 acres, or 34 percent of the Plan Area would be changed from General Agriculture-40 Acre to Innovation Center (IC-JR) and Commercial Thoroughfare (CT-JR). Implementation of the Specific Plan would also change 268 acres, or 65 percent of the Plan Area from General Agriculture-40 Acre to Specialty Agriculture (A-JR). Of these 268 acres, approximately 56 acres would be designated as Specialty Agriculture with an Air Strip Overlay (A-JR) (see Figure 3-4). Over half of the Plan Area would be designated as Specialty Agriculture and would permit various agricultural uses such as cultivated land as well as support uses such as farm-based tourism, agricultural research and processing, wineries, and farmer's markets. The Specialty Agriculture land use designations would help maintain consistency with the Prime Farmland and Unique Farmland designations of DLRP's Farmland Mapping and Monitoring Program.

Also, to reduce impacts from the loss of agricultural land, the County requires a 1:1 mitigation for agricultural land that is converted to a non-agricultural use. Under the 1:1 ratio, the conversion of approximately 141 acres of the Plan Area to non-agricultural use would result in the need to preserve 141 acres elsewhere in the Plan Area for agricultural use. As noted above, 268 acres of the Plan Area would be designated as Specialty Agriculture (A-JR), which would permit various agricultural uses. Therefore, the acreage to be preserved for agricultural use would substantially exceed the County's 1:1 mitigation requirement.

The Specialty Agriculture land use designation would also provide a buffer between the active agricultural uses south and west of the Plan Area and the urban uses proposed under the Specific Plan in the northern portion of the Plan Area (see Figure 3-4). Therefore, the buffer would protect and reduce indirect impacts to agricultural land surrounding the Plan Area. The Specialty Agriculture land use designation would also be compatible with non-agricultural land use designations and uses proposed under the Specific Plan.

Furthermore, the conversion of agricultural lands to non-agricultural uses would result in a more beneficial fiscal outcome for the County compared to existing conditions, as commercial uses would increase the value of the land and would create more employment and diverse opportunities in the County. The Plan Area is also not currently enrolled in a Williamson Act or Farmland Security Zone Contract.

Finally, Section 5.8, *Land Use and Planning*, of this DEIR provides a general plan consistency analysis, which highlights how the Specific Plan would be consistent with the applicable agricultural goals, objectives, and policies of the various elements of the King County General Plan. For example, as demonstrated in Section 5.8, LU Goal B1 of the Land Use Element calls for the protection of agricultural land throughout the County. The Specific Plan designates 268 acres, or 65 percent of the Plan Area as A-JR, which permits agriculture-related uses. Also, provision of the buffer mentioned above (buffer between the active agricultural uses south and west of the Plan Area and the urban uses proposed under the Specific Plan in the northern portion of the Plan Area) would ensure the Specific Plan's consistency with LU Objective B2.2 of the Land Use Element, which calls for the reduction in potential conflicts between agriculture and non-agricultural urban uses. Finally, the Specific Plan would be consistent with LU Objective B2.3, which calls for the increase in diversified opportunities within agricultural areas when they are compatible with agricultural operations. As noted above, over half of the Plan Area would be designated as Specialty Agriculture and would permit

various agricultural uses such as cultivated land as well as support uses such as farm-based tourism, agricultural research and processing, wineries, and farmer's markets. Therefore, the Specific Plan would be consistent with the goals and policies of the Kings County General Plan, as demonstrated in Section 5.8.

In summary, the Specific Plan would provide beneficial impacts to the County, continue existing agricultural designations and uses in the Plan Area, and be consistent with applicable goals, objectives, and policies of the various elements of the King County General Plan. Therefore, impacts to mapped important farmland would not be significant as a result of implementation of the Specific Plan.

Specific Plan – Phase One Buildout

As noted above, the Plan Area (including the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4) has historically been and is currently being used for agricultural purposes. As shown in Figure 5.1-1, DLRP designates approximately 13 acres (57 percent) of the Phase One development area (comprises approximately 23 acres) as Grazing Land, and approximately 10 acres (43 percent) as Prime Farmland. Currently, only the 10 acres designated as Prime Farmland are used for agricultural purposes and are in agricultural production (orchards). The remaining 13 acres are not currently in agriculture production; they consist of fallow agricultural land or grazing land (see Figure 3-3).

Implementation of the Specific Plan would convert the entire Phase One development area from Prime Farmland and Grazing Land to non-agricultural uses. As noted above, approximately 10 of 23 acres is currently being used for agricultural purposes (orchards). However, as also noted above, the orchards that would be removed are near the end of their productive life expectancy and would not be replaced. Additionally, the 268 acres to be preserved for agricultural use elsewhere in the Plan Area would substantially exceed the County's 1:1 mitigation requirement.

Furthermore, the conversion of agricultural lands to commercial non-agricultural uses would result in a more beneficial fiscal outcome for the County compared to existing conditions, as commercial uses would increase the value of the land and would create more employment and diverse opportunities within the County. The Specific Plan would also be consistent with the applicable agricultural goals and policies of the Kings County General Plan, as demonstrated above.

Therefore, impacts to mapped important farmland would not be significant as a result of implementation of the Specific Plan.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The roadway is a north-south, two-lane road that is surrounded by agricultural uses on both sides and runs from the Plan Area to Kettleman City. The water main would stretch along this

roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Implementation of the offsite water main improvements along 25th Avenue would not directly or indirectly impact mapped important farmland in anyway. The 25th Avenue roadway right-of-way is fully disturbed and consists of pavement and some areas of compacted soil. Additionally, no agricultural land or uses on private property abutting the entire stretch of 25th Avenue would be affected by the proposed water main improvements as the improvements would occur within the confines of the roadway right-of-way. Therefore, impacts to mapped important farmland would not occur as a result of the proposed water main improvements.

5.1.4 Cumulative Impacts

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. However, implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in the conversion of agricultural uses to non-agricultural uses. Future conversion could substantially reduce overall agricultural productivity in the County and result in a cumulative impact.

However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, as with the Specific Plan, other development projects would be required to analyze the potential impacts on DLRP's important farmland designations. They would also be required to demonstrate their consistency with applicable agricultural resources goals and policies of the Kings County General Plan. Additionally, as with the Specific Plan, other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address agricultural resources impacts, including the County's 1:1 mitigation requirement for the conversion of agricultural land to non-agricultural uses.

Furthermore, as demonstrated above, implementation of the Specific Plan would not result in a cumulative impact relative to the reduction of agricultural resources in the County, as there would be no net loss of agricultural land in the Plan Area or overall County. Additionally, the orchards onsite are at the end of their productive life expectancy and would not be replaced. Furthermore, approximately 69 acres of the Plan Area (entirely designated as Prime Farmland) would remain in agricultural production (orchards). The Specific Plan would also be consistent with applicable agricultural goals and policies of the Kings County General Plan.

In consideration of the preceding, the Specific Plan's contribution to cumulative agricultural resource impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.1.5 Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to agricultural resources apply to the Specific Plan and are described in detail in Section 5.1.1.1, *Regulatory Background*, above.

- Farmland Protection Policy Act
- Farmland Mapping and Monitoring Program
- California Land Conservation Act (Williamson Act)
- California Government Code Section 56064
- Kings County Municipal Code Section 14-38 (Agricultural Land Use Protection)
- Kings County Development Code Article 4 (Agricultural Zoning Districts)

5.1.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impact would be less than significant: 5.1-1.

5.1.7 Mitigation Measures

No significant adverse impacts related to agricultural resources were identified and no mitigation measures are necessary.

5.1.8 Level of Significance After Mitigation

No significant adverse impacts related to agricultural resources were identified.

5.1.9 References

California Department of Conservation, Division of Land Resources Protection (DLRP). 2019. Important Farmland Categories. https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx.

National Environmental Title Research, LLC (NETR). 2019, January 25. Historic Aerial Photographs. Historicalaerials.com.

Natural Resources Conservation Service (NRCS). 1992. Land Capability Classification. https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/about/history/?cid=nrcs143_021436.

5.2 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Jackson Ranch Specific Plan (Specific Plan) to impact air quality in a local and regional context. This evaluation is based on the methodology recommended by the San Joaquin Valley Air Pollution Control District (SJVAPCD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. Criteria air pollutant emissions modeling for the Specific Plan is included in Appendix C of this DEIR. Transportation-sector impacts are based on trip generation and average vehicle trip distance for passenger vehicle and trucks and is included in Appendix G1 and Appendix G2. Cumulative impacts related to air quality are based on the regional boundaries of the San Joaquin Valley Air Basin (SJVAB).

5.2.1 Environmental Setting

5.2.1.1 REGULATORY BACKGROUND

Ambient air quality standards (AAQS) have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of toxic air contaminants (TACs). The area covered by the Specific Plan (Plan Area) is in the SJVAB and is subject to the rules and regulations imposed by the SJVAPCD as well as the California AAQS adopted by California Air Resources Board (CARB) and National AAQS adopted by the United States Environmental Protection Agency (US EPA). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the Specific Plan are summarized in this section.

Federal and State

Ambient Air Quality Standards

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

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

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.2-1. These pollutants are ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 5.2-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[3]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[5]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists

Table 5.2-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
				of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

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

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

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

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

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

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

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

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

Tanner Air Toxics Act and Air Toxics Hots Information and Assessment Act

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

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

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate "toxics best available control technology" to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

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

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

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

Air Pollutants of Concern

Criteria Air Pollutants

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

A description of each of the primary and secondary criteria air pollutants and its known health effects is presented below.

- **Carbon Monoxide** is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (USEPA 2020).

- **Nitrogen Oxides** are a by-product of fuel combustion and contribute to the formation of ground-level O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_X produced by combustion is NO, but NO reacts quickly with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO_2 is only potentially irritating. NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO_2 exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO_2 exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO_2 concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (USEPA 2020).

- **Sulfur Dioxide** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO_2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (USEPA 2020).

- **Suspended Particulate Matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤10 millionths of a meter or 0.0004 inch). Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤2.5 millionths of a meter or 0.0001 inch). Particulate discharge into

the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The US EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), have human health implications, because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs. However, the US EPA or CARB has yet to adopt AAQS to regulate these particulates. Diesel particulate matter is classified by CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[2] environmental damage,[3] and aesthetic damage[4] (USEPA 2020).

- **Ozone**, or O_3, is a key ingredient of "smog" and is a gas that is formed when VOCs and NO_X, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (USEPA 2020).

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

- **Lead** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the

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

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

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

oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (USEPA 2020). Because emissions of lead are found only in projects that are permitted by SJVAPCD, lead is not an air quality of concern for the Specific Plan.

Table 5.2-2 summarizes the potential health effects associated with the criteria air pollutants.

Table 5.2-2 Criteria Air Pollutant Health Effects Summary

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

Source: CARB 2009.

Toxic Air Contaminants

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

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

Regional

San Joaquin Valley Air Pollution Control District

The primary role of SJVAPCD is to develop plans and implement control measures in the SJVAB to control air pollution. These controls primarily affect stationary sources such as industry and power plants. Rules and regulations have been developed by SJVAPCD to control air pollution from a wide range of air pollution sources. SJVAPCD also provides uniform procedures for assessing potential air quality impacts of projects and for preparing the air quality section of environmental documents.

Air Quality Management Planning

The US EPA requires states that have areas that do not meet the National AAQS to prepare and submit air quality plans showing how the National AAQS will be met. If the states cannot show how the National AAQS will be met, then the states must show progress toward meeting the National AAQS. These plans are referred to as the State Implementation Plans (SIP). CARB requires regions that do not meet California AAQS for ozone to submit clean air plans that describe measures to attain the standard or show progress toward attainment. The following describes the air quality management plans (AQMPs) prepared by the SJVAPCD, which are incorporated by reference per CEQA Guidelines Section 15150:

- **2016 Plan for the 2008 8-Hour Ozone Standard.** SJVAPCD adopted the 2016 Plan for the 2008 8-hour ozone standard in June 2016. This plan satisfies CAA requirements and ensures expeditious attainment of the 75 parts per billion 8-hour ozone standard (SJVAPCD 2016a; SJVAPCD 2020b).

- **2014 Reasonably Available Control Technology (RACT) SIP.** SJVAPCD adopted the RACT demonstration for ozone SIP in June 2014 (SJVAPCD 2014; SJVAPCD 2020b).

- **2013 Plan for the Revoked 1-Hour Ozone Standard.** SJVAPCD adopted the 2013 Plan for the Revoked 1-hour ozone standard in September 2013. In 2013, the Valley had zero violations of the 1-hour federal ozone standard. On May 6, 2014 and July 13, 2015 SJVAPCD submitted formal requests that the US EPA determine that the Valley has attained the federal 1-hour ozone standard. On July 18, 2016, the US EPA published in the Federal Register a final action determining that the San Joaquin Valley has attained the 1-hour ozone National AAQS (SJVAPCD 2013; SJVAPCD 2020b).

- **2009 Reasonably Available Control Technology (RACT) SIP.** SJVAPCD adopted the RACT demonstration for ozone SIP in April 2009 (SJVAPCD 2009; SJVAPCD 2020b).

- **2007 Ozone Plan.** SJVAPCD adopted the 2007 Ozone Plan in April 2007. This plan addresses the US EPA's 8-hour ozone standard of 84 parts per billion (ppb), which was established by EPA in 1997 (SJVAPCD 2007a; SJVAPCD 2020b).

- **2015 8-hour ozone standard.** The US EPA set the National AAQS for 8-hour ozone at 70 parts per billion (ppb) effective December 28, 2015. The US EPA designated the San Joaquin Valley as Extreme nonattainment for this standard in August 2018, with an attainment deadline of 2037. SJVACPD is mandated under federal CCA requirements to develop a new attainment plan for the revised ozone standard by 2022. Despite the significant air quality progress that has been made in the Valley, addressing the 2015 8-hour ozone standard will pose a challenge for the San Joaquin Valley given the naturally high background ozone levels and ozone transport into the Valley. Significant further emissions reductions will be needed to come into attainment of the stringent new standard. This will require concerted ongoing effort by the SJVAPCD working closely with Valley residents, businesses, and other stakeholders, to continue implementing effective and efficient air quality. The attainment plan for the 2015 federal ozone standard will build upon comprehensive strategies already in place from adopted SJVAPCD plans and CARB statewide strategies. The NOx reduction commitments from the recent 2018 $PM_{2.5}$ Plan and 2016 Ozone Plan, and other ongoing measures will assist the Valley in meeting the 70 ppb federal ozone standard. Strategies for attainment of the 2015 8-hour ozone standard will be developed through a public process, building on decades of effective control strategies (SJVAPCD 2020b).

- **2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards.** SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards on November 15, 2018. This plan addresses the US EPA federal 1997 annual $PM_{2.5}$ standard of 15 $\mu g/m^3$ and 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$; the 2006 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$; and the 2012 annual $PM_{2.5}$ standard of 12 μg (SJVAPCD 2018; SJVAPCD 2020b).

- **2016 Moderate Area Plan for the 2012 PM2.5 Standard.** SJVAPCD adopted the 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ standard on September 15, 2016. This plan addresses the US EPA federal annual $PM_{2.5}$ standard of 12 $\mu g/m^3$, established in 2012. This plan includes an attainment impracticability demonstration and request for reclassification of the Valley from Moderate nonattainment to Serious nonattainment (SJVAPCD 2016b; SJVAPCD 2020b).

- **2015 Plan for the 1997 PM2.5 Standard.** SJVAPCD adopted the 2015 Plan for the 1997 $PM_{2.5}$ standard on April 16, 2015. This plan addresses the US EPA's annual $PM_{2.5}$ standard of 15 $\mu g/m^3$ and 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$, established in 1997 (SJVAPCD 2015a; SJVAPCD 2020b).

- **2012 PM2.5 Plan.** SJVAPCD adopted the 2012 $PM_{2.5}$ Plan in December 2012. This plan addresses the US EPA's 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$, which was established by the US EPA in 2006 (SJVAPCD 2012; SJVAPCD 2020b).

- **2008 PM2.5 Plan.** SJVAPCD adopted the 2008 $PM_{2.5}$ Plan in April 2008. This plan addresses the US EPA's annual $PM_{2.5}$ standard of 15 $\mu g/m^3$, which was established by US EPA in 1997 (SJVAPCD 2008; SJVAPCD 2020b).

- **2007 PM10 Maintenance Plan.** SJVAPCD adopted the 2007 PM_{10} Maintenance Plan in September 2007 to assure the San Joaquin Valley's continued attainment of the US EPA's PM_{10} standard. The US EPA designated the Valley as an attainment/maintenance area for PM_{10} (SJVAPCD 2007b; SJVAPCD 2020b).

- **2004 Revision to the California SIP for Carbon Monoxide.** On July 22, 2004, CARB approved an update to the SIP that shows how the ten areas will maintain the standard through 2018, revises emission estimates, and establishes new on-road motor vehicle emission budgets for transportation conformity purposes (CARB 2004).

Applicable SJVAPCD Rules and Regulations

Assembly Bill 170, Reyes

AB 170 was adopted by State lawmakers in 2003, creating Government Code Section 65302.1, which requires cities and counties in the San Joaquin Valley to amend their general plans to include data, analysis, and comprehensive goals, policies, and feasible implementation strategies designed to improve air quality. The elements to be amended include, but are not limited to, those elements dealing with land use, circulation, housing, conservation, and open space. Section 65302.1.c identifies four areas of air quality discussion required in these amendments:

- A report describing local air quality conditions, attainment status, and State and federal air quality and transportation plans.

- A summary of local, district, State, and federal policies, programs, and regulations to improve air quality.

- A comprehensive set of goals, policies, and objectives to improve air quality.

- Feasible implementation measures designed to achieve these goals.

Rule 9510 – Indirect Source Review

On December 15, 2005, SJVAPCD adopted the Indirect Source Review Rule (ISR or Rule 9510) to reduce ozone precursors (i.e., VOC and NO_X) and PM_{10} emissions from new land use development projects. Specifically, Rule 9510 targets the indirect emissions from vehicles and construction equipment associated with these projects and applies to both construction and operational-related impacts. The rule applies to any applicant that seeks to gain a final discretionary approval for a development project, or any portion thereof, which upon full buildout would include any one of the following:

- 50 residential units.

- 2,000 square feet of commercial space.

- 25,000 square feet of light industrial space.

- 100,000 square feet of heavy industrial space.

- 20,000 square feet of medical office space.
- 39,000 square feet of general office space.
- 9,000 square feet of educational space.
- 10,000 square feet of government space.
- 20,000 square feet of recreational space.
- 9,000 square feet of space not identified above.
- Transportation/transit projects with construction exhaust emissions of 2 or more tons of NO_x or 2 or more tons of PM_{10}.
- Residential projects on contiguous or adjacent property under common ownership of a single entity in whole or in part, that is designated and zoned for the same development density and land use, regardless of the number of tract maps, and has the capability of accommodating more than 50 residential units.
- Nonresidential projects on contiguous or adjacent property under common ownership of a single entity in whole or in part, that is designated and zoned for the same development density and land use, and has the capability of accommodating development projects that emit 2 or more tons per year of NO_X or PM_{10} during project operations.

The rule requires all subject, nonexempt projects[5] to mitigate both construction and operational period emissions by (1) applying feasible SJVAPCD-approved mitigation measures, or (2) paying any applicable fees to support programs that reduce emissions. Offsite emissions reduction fees (offsite fees) are required for projects that do not achieve the required emissions reductions through onsite emission reduction measures. Phased projects can defer payment of fees in accordance with an OffSite Emissions Reduction Fee Deferral Schedule (FDS) approved by the SJVAPCD.

To determine how an individual project would satisfy Rule 9510, each project would submit an air quality impact assessment (AIA) to the SJVAPCD as early as possible, but no later than prior to the project's final discretionary approval, to identify the project's baseline unmitigated emissions inventory for indirect sources: onsite exhaust emissions from construction activities and operational activities from mobile and area sources of emissions (excludes fugitive dust and permitted sources).[6] Rule 9510 requires the following reductions, which are levels that the SJVAPCD has identified as necessary, based on their air quality management plans, to reach attainment for ozone and particulate matter:

[5] Development projects that have a mitigated baseline below 2 tons per year of NO_X and 2 tons per year of PM_{10} are exempt.
[6] Stationary sources of air pollutant emissions are covered separately under SJVAPCD's Rule 2201, New and Modified Stationary Source Review.

- **Construction Equipment Emissions.** The exhaust emissions for construction equipment greater than 50 horsepower (hp) used or associated with the development project shall be reduced by the following amounts from the statewide average as estimated by CARB:

  - 20 percent of the total NO_X emissions
  - 45 percent of the total PM_{10} exhaust emissions

  Mitigation measures may include those that reduce construction emissions onsite by using less polluting construction equipment, which can be achieved by utilizing add-on controls, cleaner fuels, or newer, lower emitting equipment.

- **Operational Emissions.**

  - **NO_x Emissions**. Applicants shall reduce 33.3 percent of the project's operational baseline NO_X emissions over a period of 10 years as quantified in the approved AIA.
  - **PM_{10} Emissions.** Applicants shall reduce of 50 percent of the project's operational baseline PM_{10} emissions over a period of 10 years as quantified in the approved AIA. Mitigation measures may include those that reduce construction emissions onsite by using less polluting construction equipment, which can be achieved by utilizing add-on controls, cleaner fuels, or newer, lower emitting equipment.

These requirements can be met through any combination of onsite emission reduction measures. In the event that a project cannot achieve the above standards through imposition of mitigation measures, then the project would be required to pay the applicable offsite fees. These fees are used to fund various incentive programs that cover the purchase of new equipment, engine retrofit, and education and outreach.

Rule 2201 – New and Modified Stationary Source Review

SJVAPCD adopted Rule 2201, New and Modified Stationary Source Review, to control emissions from new stationary sources and all modifications to existing stationary sources which are subject to SJVAPCD's permit requirements (i.e., "permit projects" for which the SJVAPCD is the lead agency). Permit projects that exceed the Source Performance Standards are required to install Best Available Control Technology (BACT) to control emissions to the maximum extent practicable.

Regulation VIII – FugitivePM_{10} Prohibitions

SJVAPCD controls fugitive PM_{10} through Regulation VIII, *Fugitive PM_{10} Prohibitions*. The purpose of this regulation is to reduce ambient concentrations of PM_{10} and $PM_{2.5}$ by requiring actions to prevent, reduce, or mitigate anthropogenic (human caused) fugitive dust emissions.

- **Regulation VIII, Rule 8021** applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel onsite, and travel on access roads to and from the site.

- **Regulation VIII, Rule 8031** applies to the outdoor handling, storage, and transport of any bulk material.
- **Regulation VIII, Rule 8041** applies to sites where carryout or trackout has occurred or may occur on paved roads or the paved shoulders of public roads.
- **Regulation VIII, Rule 8051** applies to any open area having 0.5 acre or more within urban areas or 3.0 acres or more within rural areas and contains at least 1,000 square feet of disturbed surface area.
- **Regulation VIII, Rule 8061** applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project.
- **Regulation VIII, Rule 8071** applies to any unpaved vehicle/equipment traffic area.
- **Regulation VIII, Rule 8081** applies to off-field agricultural sources.

Sources regulated are required to provide Dust Control Plans that meet the regulation requirements. Under Rule 8021, a Dust Control Plan is required for any residential project that will include 10 or more acres of disturbed surface area, a nonresidential project with 5 or more acres of disturbed surface area, or a project that relocates 2,500 cubic yards per day of bulk materials for at least three days. The Dust Control Plan is required to be submitted to SJVAPCD prior to the start of any construction activity. The Dust Control Plan must also describe fugitive dust control measure to be implemented before, during, and after any dust-generating activity. For sites smaller than those listed above, the project is still required to notify SJVAPCD a minimum of 48 hours prior to commencing earthmoving activities.

Rule 4102 – Nuisance Odors

SJVAPCD controls nuisance odors through implementation of Rule 4102, Nuisance. Pursuant to this rule, "a person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property."

Rule 9410 – Employer Based Trip Reduction Program

SJVAPCD has implemented Rule 9410, Employer Based Trip Reduction. The purpose of this rule is to reduce vehicle miles traveled (VMT) from private vehicles used by employees to commute to and from their worksites to in turn reduce emissions of NO_x, VOC, and particulate matter (PM_{10} and $PM_{2.5}$). The rule applies to employers with at least 100 employees. Employers are required to implement an Employer Trip Reduction Implementation Plan (ETRIP) for each worksite with 100 or more eligible employees to meet applicable targets specified in the rule. Employers are required to facilitate the participation of the development of ETRIPs by providing information to its employees explaining the requirements and applicability of this rule. Employers are required to prepare and submit an ETRIP for each worksite to SJVAPCD. The ETRIP must be updated annually. Under this rule, employers shall collect information on the modes of transportation used for each eligible employee's commutes both to and from work for every day of

the commute verification period, as defined by using either the mandatory commute verification method or a representative survey method. Annual reporting includes the results of the commute verification for the previous calendar year along with the measures implemented as outlined in the ETRIP and, if necessary, any updates to the ETRIP.

5.2.1.2 EXISTING CONDITIONS

San Joaquin Valley Air Basin

The Plan Area is in the central portion of the SJVAB. SJVAB consists of eight counties: Fresno, Kern (western and central), Kings, Tulare, Madera, Merced, San Joaquin, and Stanislaus. Air pollution from significant activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air.

The SJVAB is approximately 250 miles long and an average of 35 miles wide. It is bordered by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south. There is a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Straits. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl-shaped topography inhibits movement of pollutants out of the valley (SJVAPCD 2015a).

Climate

The SJVAB is in a Mediterranean climate zone, which is characterized by sparse rainfall, which occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100 degrees Fahrenheit (°F) in the valley. Winter-time high pressure events can often last many weeks, with surface temperatures often lowering to 30°F. During these events, fog can be present, and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet (SJVAPCD 2015a).

In addition, the SJVAB is influenced by a subtropical high-pressure cell for most of the year. The high-pressure cell is strongest during spring, summer, and fall and produces subsiding air, which can result in temperature inversions in the valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500 to 3,000 feet) (SJVAPCD 2015a).

The climatological station nearest to the project area is the Kettleman City Monitoring Station (ID No. 044534). The average low is reported at 35.2°F in January, and the average high is 100.1°F in July (WRCC 2019). Rainfall averages 6.64 inches per year in the project area (WRCC 2019).

Temperature

Solar radiation and temperature are particularly important in the chemistry of ozone formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily ozone) is produced by the atmospheric reaction of organic substances (such as volatile organic compounds) and nitrogen dioxide under the influence of sunlight. Ozone concentrations are very dependent on the amount of solar radiation, especially during late spring, summer, and early fall. Ozone levels typically peak in the afternoon. After the sun goes down, the chemical reaction between nitrous oxide and ozone begins to dominate. This reaction tends to scavenge and remove the ozone in the metropolitan areas through the early morning hours, resulting in the lowest ozone levels, possibly reaching zero at sunrise in areas with high nitrogen oxides emissions. At sunrise, nitrogen oxides tend to peak, partly due to low levels of ozone at this time and also due to the morning commuter vehicle emissions of nitrogen oxides.

Generally, the higher the temperature, the more ozone formed since reaction rates increase with temperature. However, extremely hot temperatures can "lift" or "break" the inversion layer. Typically, if the inversion layer does not lift to allow the buildup of contaminants to be dispersed, the ozone levels will peak in the late afternoon. If the inversion layer breaks and the resultant afternoon winds occur, the ozone will peak in the early afternoon and decrease in the late afternoon as the contaminants are dispersed or transported out of the SJVAB.

Ozone levels are low during winter periods when there is much less sunlight to drive the photochemical reaction (SJVAPCD 2015a).

Wind

Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing and transporting it to other locations.

Especially in summer, winds in the valley most frequently blow from the northwest. The region's topographic features restrict air movement and channel the air mass towards the southeastern end of the valley. Marine air can flow into the basin from the San Joaquin River Delta and over Altamont Pass and Pacheco Pass, where it can flow along the axis of the valley, over the Tehachapi pass, into the Southeast Desert Air Basin. This wind pattern contributes to transporting pollutants from the Sacramento Valley and the Bay Area into the SJVAB. Approximately 27 percent of the total emissions in the northern portion, 11 percent of total emissions in the central region, and 7 percent of total emission in the south valley of the SJVAB are attributed to air pollution transported from these two areas (SJVAPCD 2015aa). The Coastal Range is a barrier to air movement to the west and the high Sierra Nevada range is a significant barrier to the east (the highest peaks in the southern Sierra Nevada reach almost halfway through the Earth's atmosphere). Many days in the winter are marked by stagnation events where winds are very weak. Transport of pollutants during winter can be very limited. A secondary but significant summer wind pattern is from the southeast and can be associated with nighttime drainage winds, prefrontal conditions, and summer monsoons.

Two significant diurnal wind cycles that occur frequently in the valley are the sea breeze and mountain-valley upslope and drainage flows. The sea breeze can accentuate the northwest wind flow, especially on summer afternoons. Nighttime drainage flows can accentuate the southeast movement of air down the valley. In the mountains during periods of weak synoptic scale winds, winds tend to be upslope during the day and downslope at night. Nighttime and drainage flows are especially pronounced during the winter when flow from the easterly direction is enhanced by nighttime cooling in the Sierra Nevada. Eddies can form in the valley wind flow and can recirculate a polluted air mass for an extended period (SJVAPCD 2015a).

Precipitation, Humidity, and Fog

Precipitation and fog may reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog can block the required solar radiation. Wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Atmospheric moisture can also increase pollution levels. In fogs with less water content, the moisture acts to form secondary ammonium nitrate particulate matter. This ammonium nitrate is part of the valley's $PM_{2.5}$ and PM_{10} problem. The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the SJVAB floor. This creates strong low-level temperature inversions and very stable air conditions, which can lead to tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of $PM_{2.5}$ and PM_{10} (SJVAPCD 2015a).

Inversions

The vertical dispersion of air pollutants in the San Joaquin Valley can be limited by persistent temperature inversions. Air temperature in the lowest layer of the atmosphere typically decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. The height of the base of the inversion is known as the "mixing height." This is the level to which pollutants can mix vertically. Mixing of air is minimized above and below the inversion base. The inversion base represents an abrupt density change where little air movement occurs.

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor (SJVAPCD 2015a).

SJVAB Nonattainment Areas

The air quality management plans (AQMP) prepared by SJVAPCD provide the framework for SJVAB to achieve attainment of the State and federal AAQS through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

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

The attainment status for the SJVAB is shown in Table 5.2-3.

Table 5.2-3 Attainment Status of Criteria Pollutants in the San Joaquin Valley Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Severe Nonattainment	No Federal Standard[1]
Ozone – 8-hour	Nonattainment	Extreme Nonattainment[2]
PM_{10}	Nonattainment	Attainment[3]
$PM_{2.5}$	Nonattainment	Nonattainment[4]
CO	Attainment/Unclassified	Attainment/Unclassified
NO_2	Attainment	Attainment/Unclassified
SO_2	Attainment	Attainment/Unclassified
Lead	Attainment	No Designation/Classification
Hydrogen Sulfide	Unclassified	No Federal Standard
Sulfates	Attainment	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard
Vinyl Chloride	Attainment	No Federal Standard

Source: SJVAPCD 2020c.

1 Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, the US EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

2 Effective June 15, 2005, the US EPA revoked the federal 1-hour ozone standard, including associated designations and classifications. The US EPA had previously classified the SJVAB as extreme nonattainment for this standard. The US EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

3 On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM_{10} National AAQS and approved the PM_{10} Maintenance Plan.

4 The Valley is designated nonattainment for the 1997 $PM_{2.5}$ National AAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 National AAQS on November 13, 2009 (effective December 14, 2009).

Existing Ambient Air Quality

CARB, in cooperation with SJVAPCD, monitors air quality throughout the SJVAB. Existing levels of ambient air quality and historical trends and projections in the vicinity of the Plan Area are best documented by measurements taken by the SJVAPCD. The Hanford – South Irwin Street Monitoring Station monitors O_3, $PM_{2.5}$, PM_{10}, and NO_2. The most current five years of data monitored at these monitoring stations are included in Table 5.2-4. The data show recurring violations of state and federal O_3 and PM_{10} standards and federal $PM_{2.5}$ standards. The area has not exceeded the NO_2 standards in the last five years.

Table 5.2-4 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Thresholds Were Exceeded and Maximum Levels				
	2014	2015	2016	2017	2018
Ozone (O_3)					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	5	4	2	7	1
State 8-hour ≥ 0.07 ppm (days exceed threshold)	39	42	49	38	29
Federal 8-Hour > 0.075 ppm (days exceed threshold)[1]	14	22	20	22	12
Max. 1-Hour Conc. (ppm)	0.108	0.119	0.097	0.106	0.108
Max. 8-Hour Conc. (ppm)	0.094	0.094	0.088	0.094	0.082
Nitrogen Dioxide (NO_2)					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.050	0.051	0.0522	0.0569	0.0563
Coarse Particulates (PM_{10})					
State 24-Hour > 50 µg/m^3 (days exceed threshold)	22	17	20	20	19
Federal 24-Hour > 150 µg/m^3 (days exceed threshold)	0	0	0	2	1
Max. 24-Hour Conc. (µg/m^3)	131.3	136.9	152.2	298.4	174.2
Fine Particulates ($PM_{2.5}$)					
Federal 24-Hour > 35 µg/m^3 (days exceed threshold)	30	25	25	33	31
Max. 24-Hour Conc. (µg/m^3)	96.7	98.2	59.7	113.4	107.8

Source: CARB 2020.
Notes: ppm: parts per million; parts per billion, µg/m^3: micrograms per cubic meter
[1] On October 1, 2015 the EPA adopted a new 8-hour National ambient air quality standards (AAQS) for ozone of 0.070 ppm (70 ppb).

Existing Emissions

The Plan Area mainly consists of almond orchards, in addition to grazing land and other crops, such as pistachios, apricots, and plums. In order to provide a conservative analysis of the increase in GHG emissions generated by the Specific Plan, onsite emissions within the Plan Area are considered to be nominal.

Sensitive Receptors

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

Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

The nearest urbanized area to the Plan Area is Kettleman City, an unincorporated community of the County approximately 6 miles to the northwest. The nearest sensitive receptor are over four miles to the north of the Plan Area.

5.2.2 Thresholds of Significance

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

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

AQ-3 Expose sensitive receptors to substantial pollutant concentrations.

AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.[7]

5.2.2.1 SAN JOAQUIN AIR POLLUTION CONTROL DISTRICT THRESHOLDS

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management district may be relied on to make the above determinations. Thus, this analysis also evaluates the Specific Plan's air quality impacts pursuant to SJVAPCD's recommended guidelines and thresholds of significance, as discussed further below.

SJVAPCD has developed the *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) and recently adopted the latest version on March 19, 2015 (SJVAPCD 2015a). The current GAMAQI represents the latest guidance for addressing air quality impacts in the SJVAB. Changes to the GAMAQI are primarily administrative in nature to update air basin information, attainment status, and general guidance to reflect updated conditions. The following thresholds of significance from the SJVAPCD's GAMAQI are used to determine whether a proposed project would result in a significant air quality impact.

Regional Significance Thresholds

SJVAPCD has identified regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SJVAB. Specifically, these thresholds gauge whether a project would significantly contribute to a nonattainment designation based on the mass emissions generated. Mass emissions from a project are not correlated with concentrations of air pollutants. Table 5.2-5 lists SJVAPCD's regional significance thresholds. It should be noted that SJVAPCD Rule 9510 and Regulation VIII may not reduce project-specific construction and operational emissions to below the SJVAPCD thresholds

[7] The Initial Study, included as Appendix A, substantiates that impacts associated with impact AQ-4 would be less than significant. However, since the Specific Plan includes a wastewater treatment plant onsite, odors from this facility are addressed in this section.

Table 5.2-5 SJVAB REGIONAL CRITERIA AIR POLLUTANTS SIGNIFICANCE THRESHOLDS

Air Pollutant	Construction and Operation Phase
Reactive Organic Gases (ROG)	10 tons/year
Carbon Monoxide (CO)	100 tons/year
Nitrogen Oxides (NO_X)	10 tons/year
Sulfur Oxides (SO_X)	27 tons/year
Coarse Particulates (PM_{10})	15 tons/year
Fine Particulates ($PM_{2.5}$)	15 tons/year

Source: SJVAPCD 2015a.

Ambient Air Quality Analysis

The need to perform air quality dispersion modeling for typical urban development projects is determined on a case-by-case basis, depending on project size. SJVAPCD applies the following guidance in determining whether an ambient air quality analysis should be conducted for development projects. Compliance with Rule 9510 frequently reduces project-specific emissions to less than significant levels. However, for large construction projects, additional mitigation may be required. SJVAPCD recommends that an ambient air quality analysis be performed for all pollutants when onsite emissions of any criteria pollutant from construction activities would equal or exceed any applicable threshold of significance for criteria pollutants, or 100 pounds per day of any criteria pollutant, after compliance with Rule 9510 requirements and implementation of all enforceable mitigation measures. Similarly, SJVAPCD also recommends that an ambient air quality analysis be performed for all criteria pollutants when emissions of any criteria pollutant resulting from project operational activities exceed the 100 pounds per day screening level, after compliance with Rule 9510 requirements and implementation of all enforceable mitigation measures.

However, air dispersion modeling is not applicable at a program level. Consequently, for the purpose of this program-level DEIR, emissions of any criteria air pollutant that would exceed the applicable threshold of significance identified in Table 5.2-5 is considered to result in elevated concentrations of air pollutants that have the potential to exceed the AAQS. It should be noted that CO hotspot monitoring was previously required under the GAMAQI. However, emissions from motor vehicles, by far the largest source of CO emissions, have been declining since 1985 despite increases in VMT due to the introduction of new automotive emission controls and fleet turnover. Consequently, no CO hotspots have been reported in the SJVAB even at the most congested intersections.

Consistency with the Applicable Air Quality Plan

SJVAPCD has prepared plans to attain federal and State AAQS. The significance thresholds in Table 5.2-5 are based on SJVAPCD's New Source Review (NSR) offset requirements for stationary sources. Emission reductions achieved through implementation of SJVAPCD's offset requirements are a major component of SJVAPCD's air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants (see Table 5.2-5) would be determined to "not conflict or obstruct implementation of the District's air quality plan." Because dispersion modeling is not applicable for a program EIR, projects with emissions

that exceed these values are considered to have the potential to exceed the AAQS, resulting in a potentially significant impact.

Odor

Odor impacts associated with a proposed project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors. There are two general scenarios where a project could expose people to substantial odors:

- **Odor Generator.** Projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate.
- **Odor Receiver.** Residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine if potential odors would have a significant impact. Rather, projects must be assessed on a case-by-case basis. As shown in Table 5.2-6, the SJVAPCD has identified buffer distances for common types of facilities that have been known to produce odors in the SJVAB. The degree of odors could be significant and may be based on a review of SJVAPCD's complaint records.

Table 5.2-6 SJVAPCD Screening Levels for Potential Odor Sources

Land Use/Type of Operation	Screening Distance
Wastewater Treatment Plant	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Food Processing Facility	1 mile
Feed Lot/ Dairy	1 mile
Rendering Plant	1 mile

Source: SJVAPCD 2015a.

For a project locating near an existing source of odors, in Califor*nia Building Industry Association v. Bay Area Air Quality Management District* (CBIA), the California Supreme Court ruled that CEQA generally does not require an evaluation of impacts of the environment on a project unless a project will exacerbate an existing environmental hazard.

Health Risk

Whenever a project would require use of chemical compounds that have been identified in SJVAPCD's Rule 2201, placed on CARB's air toxics list pursuant to Assembly Bill 1807 (AB 1807), Toxic Air Contaminant Identification and Control Act (1983), or placed on the US EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is warranted. In addition, if a project would place sensitive land uses proximate to major sources of TACs (roadways with over 50,000 vehicles per day or major stationary sources), a health risk assessment may also be warranted. Table 5.2-7 lists the SJVAPCD's TAC incremental risk thresholds for operation of a project or placement of sensitive land uses proximate to major sources of air pollution. As stated, under the CBIA ruling, while CEQA is generally not required to analyze impacts of the environment on a project, where a project will exacerbate an existing environmental hazard, CEQA requires an analysis of the worsened condition on future project residents and the public at large. However, projects that do not generate emissions that exceed the values in Table 5.2-7 would not substantially contribute to cumulative air quality hazards or exacerbate an existing environmental hazard.

Table 5.2-7 SJVAPCD Toxic Air Contaminants Incremental Risk Thresholds

Risk Type	Threshold
Cancer Risk[1]	≥ 10 in 1 million
Hazard Index[2]	≥ 1.0

Source: SJVAPCD 2015a
[1] For the Maximum Exposed Individuals (MEI).
[2] Ground-level concentrations of noncarcinogenic TACs for the MEI.

Cumulative Impacts

By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development. Future attainment of federal and State AAQS is a function of successful implementation of the SJVAPCD's attainment plans. Consequently, SJVAPCD's application of thresholds of significance for criteria pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. Pursuant to the SJVAPCD's guidance, if project-specific emissions would be less than the thresholds of significance for criteria pollutants, the project would not be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the SJVAPCD is in nonattainment under applicable federal or State AAQS.

5.2.3 Environmental Impacts

5.2.3.1 METHODOLOGY

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the Specific Plan. SJVAPCD has published the GAMAQI, which provides local governments with guidance for analyzing and mitigating air quality impacts and was used in this analysis. The Specific Plan's criteria air pollutant emissions inventory includes the following sectors:

Regional Operational Phase Emissions

- **Transportation.** The annual VMT is based on the average daily trip (ADT) generation and average trip distance traveled for trucks and passenger vehicles as provided by Kittelson (see Appendix G1 and Appendix G2 of this DEIR). Table 5.2-8 provides a summary of the trip generation and VMT for Phases One and Two of the Specific Plan, as well as for full buildout. As shown in the table, truck trips constitute 30 percent of total trips (total passenger plus truck trips) and for purposes of this analysis, all trucks are assumed to be heavy-heavy duty trucks. Additionally, the trip lengths provided under each phase are an average based on traffic data provided by Kittelson. Also, for purposes of the air quality modeling conducted, the traffic data was compiled to develop the combined trip lengths to conform to CalEEMod methodology. Furthermore, diverted trips[8] and its associated VMT are accounted for in the totals shown in the table. Diverted trips account for an average trip length of 0.5 mile/diverted trip. For further details, refer to emissions modeling files provided Appendix C of this DEIR.

Table 5.2-8 Project Trip Generation and VMT

	Phase One		Phase Two		Buildout[1]	
	Passenger Vehicles	Trucks[2]	Passenger Vehicles	Trucks[2]	Passenger Vehicles	Trucks[2]
Annual Trips[3,4]	2,755,584	1,181,128	1,275,196	546,468	4,030,780	1,727,596
Annual VMT[3,4]	27,258,036	92,538,680	1,765,296	59,202,936	29,023,332	151,741,616
Average Trip Length (miles/trip)	9.89	78.35	1.38	108.34	7.20	87.83

Source: See Appendix G1 and Appendix G2 of this DEIR.
1 Consists of buildout of Phases One and Two.
2 Trucks generate 30 percent of total daily trips on average.
3 Based on 364 days per year per CalEEMod methodology.
4 Includes diverted trips and VMT.

The default CalEEMod emissions rates for year 2023 (Phase One opening year) and year 2040 (full buildout [Phases One and Two] year) were updated with emission rates derived from EMFAC2017, Version 1.0.2, and CalEEMod methodology. The primary source of mobile-source criteria air pollutant emissions is tailpipe exhaust emissions from the combustion of fuel (i.e., gasoline and diesel).

- **Transport Refrigeration Units.** Emissions from transport refrigeration units (TRUs) are based on the operation of 75 trucks with TRUs per day Monday through Thursday and 76 trucks per day Friday through Sunday, 120 minutes of idling per unit per day, and calendar year 2040 aggregated emission rates for various TRU types obtained from OFFROAD2017, Version 1.0.1.

- **Area Sources.** Area source emissions from use of landscaping equipment are based on CalEEMod default values and the square footage of the proposed buildings and surface parking lot areas.

[8] Unlike new trips generated by a development project, diverted trips are trips that are already in the circulation network and divert from their path to reach the project during a trip between their main origin and destination. For the case of Jackson Ranch, diverted trips are drivers already traveling along I-5 and simply making a stop to buy food or purchase gas as they make their way back onto the freeway and continue to their main origin and destination.

- **Off-Road Equipment.** It is anticipated the Specific Plan would utilize up to 140 forklifts powered by compressed natural gas (CNG) and 7 diesel-powered yard trucks for daily operations. As modeled, the forklifts would each operate 12 hours per day and 365 days per year. The yard trucks would each operate for 4 hours per day and 365 days per year. Forklift and yard truck emissions are based on calendar year 2040 OFFROAD2017, Version 1.0.1, emission factors for a 100-horsepower industrial forklift and 175-horsepower rail yard tractor, respectively.

- **Energy.** Natural gas use is based on the CalEEMod defaults for the nonresidential land uses. New buildings are modeled to comply with the 2019 Building Energy Efficiency Standards, which are 30 percent more energy efficient for non-residential buildings than the 2016 Building Energy Efficiency Standards.

- **Wastewater Treatment Facility (WWTF).** For purposes of this analysis, emissions associated with operation of the proposed wastewater treatment facility (WWTF) are not included in the overall emissions inventory associated with the land uses accommodated under the Specific Plan. The proposed WWTF would be processed separately through the SJVACPD new source review permitting process under Rule 2201.

Regional Construction Phase Emissions

Construction of development projects accommodated by the Specific Plan is anticipated to occur based on the market demand for facilities in the Plan Area. Emissions modeling is based on buildout of Phase One in 2023 and buildout of Phase Two, or the overall Specific Plan in 2040. Emissions would primarily be from operation of off-road construction equipment in addition to construction worker, vendor, and haul vehicles. It is assumed that 50 percent of all asphalt demolition debris material would be recycled onsite and reused while the remaining debris would be hauled to an offsite location.

5.2.3.2 IMPACT ANALYSIS

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

Impact 5.2-1: Construction activities associated with the Specific Plan would result in emissions that exceed the SJVAPCD's significant criteria and would cumulatively contribute to the nonattainment designation and health impact in the SJVAB. [Thresholds AQ-2]

Impact Analysis: Construction activities associated with the Specific Plan (under the Plan Area Buildout and Phase One Buildout) would temporarily increase PM_{10}, $PM_{2.5}$, VOC, NO_X, SO_X, and CO regional emissions in the SJVAB. The primary source of NO_x, CO, and SO_x emissions is the operation of construction equipment. The primary sources of particulate matter (PM_{10} and $PM_{2.5}$) emissions are activities that disturb the soil, such as grading and excavation, road construction, and building demolition and construction. The primary source of VOC emissions is the application of architectural coating and off-gas emissions associated with asphalt paving. A discussion of health impacts associated with air pollutant emissions generated by construction activities is included in section 5.2.1, *Environmental Setting, Air Pollutants of Concern.*

Construction air pollutant emissions are based on the preliminary construction information and CalEEMod defaults and are subject to changes during final design of individual development projects accommodated by the Specific Plan and as dictated by field conditions. Construction would entail demolition of existing asphalt, onsite reprocessing of demolition debris, export of demolition debris, site preparation, grading, utility trenching, construction of the proposed buildings, architectural coating, and asphalt paving. An estimate of maximum daily construction emissions for the Specific Plan is provided in Table 5.2-9.

Table 5.2-9 Regional Construction Emissions

	Pollutants (tons per year)					
Construction Year	**VOC**	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Specific Plan – Phase One[1]						
Year 2021	1	7	6	<1	1	1
Year 2022	1	4	4	<1	1	<1
Year 2023	2	3	3	<1	1	<1
Maximum Annual Emissions	2	7	6	<1	1	1
SJVAPCD Threshold	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Specific Plan – Plan Area Buildout[2]						
Year 2024	20	19	22	<1	8	3
Year 2025	2	11	13	<1	5	1
Year 2026	2	10	11	<1	4	1
Year 2027	1	10	11	<1	4	1
Year 2028	1	10	10	<1	4	1
Year 2029	1	10	10	<1	4	1
Year 2030	1	9	9	<1	4	1
Year 2031	1	9	9	<1	4	1
Year 2032	1	9	8	<1	4	1
Year 2033	1	9	8	<1	4	1
Year 2034	1	9	8	<1	4	1
Year 2035	1	9	8	1	4	1
Year 2036	1	6	5	<1	3	1
Maximum Annual Emissions	20	19	22	1	8	3
SJVAPCD Threshold	10	10	100	27	15	15
Significant?	**Yes**	**Yes**	No	No	No	No

Source: CalEEMod Version 2016.3.2
Notes: **Bold** = Exceedance
[1] Durations are based on the CalEEMod default construction durations normalized to a three-year buildout duration (i.e., 2021 through 2023).
[2] Durations are based on the CalEEMod default construction durations normalized to a 17-year buildout duration (i.e., 2024 through 2040).

Specific Plan – Plan Area Buildout

As shown in Table 5.2-9, construction activities associated with buildout of the Specific Plan would not exceed the SJVAPCD regional threshold for SO_X, CO, PM_{10}, or $PM_{2.5}$. In fact, the emission levels from these

air quality pollutants are shown to be significantly below the SJVAPCD regional thresholds. Additionally, construction activities associated with buildout of the Specific Plan would be temporary and would cease upon completion of individual development projects accommodated by the Specific Plan, as would the generation of construction-related emissions of SO_X, CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X.

However, buildout of the Specific Plan could potentially exceed the SJVAPCD regional threshold for VOC and NO_X. The primary source of NO_X emissions is vehicle and construction equipment exhaust while the primary source of VOC is from paints and coatings. Emissions of VOC and NO_X are precursors to the formation of O_3. In addition, NO_X is a precursor to the formation of particulate matter (PM_{10} and $PM_{2.5}$). Thus, emissions of VOC and NO_X that exceed the SJVAPCD regional significance thresholds would contribute to the O_3 and particulate matter (PM_{10} and $PM_{2.5}$) nonattainment designation of the SJVAB. Therefore, implementation of the Specific Plan buildout would result in a potentially significant impact because it would significantly contribute to the nonattainment designations of the SJVAB

Specific Plan – Phase One Buildout

As shown in Table 5.2-9, construction activities associated with buildout of Phase One would not result in short-term emissions that would exceed the SJVAPCD regional thresholds for any of the air quality pollutants. Thus, buildout of Phase One would not result in emissions that cumulatively contribute to the nonattainment designations of the SJVAB. Additionally, construction activities associated with buildout of Phase One would be temporary and would cease upon completion of individual development projects accommodated by the Specific Plan, as would the generation of construction-related emissions of SO_X, CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description*, implementation of the Specific Plan would include on- and offsite construction-related activities. Onsite activities are discussed above. Offsite improvements include the installation of a water main system to provide potable water to future uses of the Plan Area. The water main would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The roadway is a north-south, two-lane road that is surrounded by agricultural uses on both sides and runs from the Plan Area to Kettleman City. The water main would stretch along this roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Installation of the offsite water main improvements would result in construction-related emissions. For purposes of this analysis, construction of the water main improvements is evaluated as part of Phase One buildout. As discussed above, construction activities associated with development of Phase One would not result in generating emissions that exceed the SJVAPCD significance thresholds. Therefore, installation of the offsite water main improvements would similarly not result in emissions that cumulatively contribute to the nonattainment designations of the SJVAB.

Summary

Rule 9510

As part of the development process, individual, site-specific projects accommodated under the Specific Plan (under both the Plan Area and Phase One buildout) that meet the criteria of Rule 9510 would be required to prepare a detailed air quality impact assessment (AIA). To the extent applicable under Rule 9510 for individual development projects, SJVAPCD would require calculation of the construction emissions from the development. The purpose of the AIA is to confirm a development's construction exhaust emissions, and therefore be able to identify appropriate mitigation, either through implementation of specific mitigation measures (e.g., use of construction equipment with Tier 4-rated engines) or payment of applicable offsite fees. As stated, under Rule 9510, each project that is subject to this rule would be required to reduce construction exhaust emissions by 20 percent for NO_x or pay offset mitigation fees for emissions that do not achieve the mitigation requirements. While adherence to Rule 9510 would contribute to reducing exhaust NO_X emissions, it would not be applicable to reducing VOC emissions generated from operation of equipment and from off-gassing from asphalt and paints. Therefore, project-related construction activities associated with the Specific Plan buildout would result in potentially significant regional air quality impacts.

Health Impacts

Emissions exceeding the SJVAPCD thresholds would cumulatively contribute to the nonattainment status of the SJVAB and would contribute in elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants. Because attainment plans and supporting air model tools are regional in nature, they are not typically used to evaluate the impacts to ambient concentrations of criteria air pollutants, or to correlate those impacts to the potential resultant impacts to public health effects, from an individual project.[9] As a result, although construction emissions associated with buildout of the Specific Plan would temporarily exceed the SJVAPCD threshold for VOC and NOx, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited above.

SJVAPCD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SJVAB and at the present time, it has not provided a methodology to assess the specific correlation between mass emissions generated and the effect on health in

[9] Generally, models that correlate criteria air pollutant concentrations with specific health effects focus on regulatory decision-making that will apply throughout an entire air basin or region. These models focus on the regionwide health effects of pollutants so that regulators can assess the costs and benefits of adopting a proposed regulation that applies to an entire category of air pollutant sources, rather than the health effects related to emissions from a specific proposed project or source. Because of the scale of these analyses, any one project is likely to have only very small incremental effects which may be difficult to differentiate from the effects of air pollutant concentrations in an entire air basin.

order to address the issue raised in *Sierra Club v. County of Fresno (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S21978* (Friant Ranch). Ozone concentrations are dependent on a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, the usefulness of applying the available models accurately link health risks to the magnitude of emissions exceeding the significance thresholds for project-level analyses is limited.[10] To achieve the health-based standards established by the US EPA, the air districts prepare air quality management plans that details regional programs to attain the AAQS. Nonetheless, the Specific Plan (Plan Area buildout) would contribute to an increase in health effects in the basin until such time the attainment standards are met in the SJVAB.

Impact 5.2-2: Long-term operation of the Specific Plan would result in emissions that exceed the SJVAPCD's significant criteria and would cumulatively contribute to the nonattainment designation and health impact in the SJVAB. [Thresholds AQ-2]

Impact Analysis: Implementation of the Specific Plan (under the Plan Area Buildout and Phase One Buildout) would result in direct and indirect criteria air pollutant emissions from transportation, energy (e.g., natural gas use), and area sources (e.g., aerosols and landscaping equipment) on 41 percent of the Plan Area associated with the proposed travel-oriented services.[11] Operation activities associated with the Specific Plan would increase PM_{10}, $PM_{2.5}$, VOC, NO_X, SO_X, and CO regional emissions in the SJVAB.

Specific Plan – Plan Area Buildout

Table 5.2-10 identifies the maximum daily criteria air pollutant emissions that would result from implementation of the Specific Plan at buildout year (2040). As shown in the tables, air pollutant emissions associated the Specific Plan would not exceed the SJVAPCD regional threshold for SO_X. In fact, the emission level from this air quality pollutant is shown to be significantly below the SJVAPCD regional thresholds. However, air pollutant emissions associated the Specific Plan would exceed the SJVAPCD regional emissions thresholds for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. Emissions of VOC and NO_x that exceed the SJVAPCD regional threshold would cumulatively contribute to the O_3 nonattainment designation of the SJVAB. Emissions of PM_{10} and $PM_{2.5}$ in addition to NOx that exceed SJVAPCD's regional significance thresholds would also cumulatively contribute to the particulate matter (PM_{10} and $PM_{2.5}$) nonattainment designations of the SJVAB. Therefore, implementation of the Specific Plan buildout would result in a potentially significant impact because it would significantly contribute to the nonattainment designations of the SJVAB.

[10] For regional pollutants, it is difficult to trace a particular project's criteria air pollutant emissions to a specific health effect. Moreover, the modeled results may be misleading because the margin of error in such modeling is large enough that, even if the modeled results report a given health effect, the model is sufficiently imprecise that the actual effect may differ from the reported results; that is, the modeled results suggest precision, when in fact available models cannot be that precise on a project level.

[11] The remaining 59 percent of the Plan Area would remain under agricultural production and would not result in a net increase in emissions.

Table 5.2-10 Maximum Regional Operational Phase Emissions – Plan Area Buildout

Sources	Criteria Air Pollutants (tons per year)					
	VOC	NOx	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	12	<1	<1	0	<1	<1
Energy	<1	2	1	<1	<1	<1
Mobile – Passenger Vehicles[1]	2	1	23	<1	10	3
Mobile – Transport Trucks[1,2]	4	377	50	2	69	22
Transport Refrigeration Units[3,4]	<1	3	6	<1	<1	<1
Off-Road Equipment[5]	<1	43	433	<1	<1	<1
Total Annual Emissions	**19**	**427**	**513**	2	**80**	**25**
SJVAPCD Threshold	10	10	100	27	15	15
Exceeds Threshold	**Yes**	**Yes**	**Yes**	No	**Yes**	**Yes**

Source: CalEEMod, Version 2016.3.2. Based on trip generation and VMT provided by Kittelson (Appendix G1 and Appendix G2).
Notes: Manual summation of emissions for each pollutant may not equal to the shown total due to rounding. **Bold** = Exceedance.
[1] Based on calendar year 2040 aggregated emission rates derived EMFAC2017 Version 1.0.2 and CalEEMod methodology.
[2] All trucks modeled as heavy-heavy duty trucks.
[3] Based on calendar year 2040 emission rates for TRUs obtained from OFFROAD2017 Version 1.0.1.
[4] Based on 76 trucks with TRUs per day and 120 mins of idling per truck per day.
[5] Based on 140 CNG-powered forklifts and 7 diesel-powered yard trucks operating onsite. Forklift and yard truck emissions are based on calendar year 2040 OFFROAD2017, Version 1.0.1, emission factors for a 100-horsepower industrial forklift and 175-horsepower rail yard tractor, respectively.

Specific Plan – Phase One Buildout

Table 5.2-11 identifies the maximum daily criteria air pollutant emissions that would result from implementation of Phase One at opening year (2023). As shown in the tables air pollutant emissions associated with the Phase One would not exceed the SJVAPCD regional threshold for VOC CO, or SO_X. In fact, the emission levels from these air quality pollutants are shown to be significantly below the SJVAPCD regional thresholds. However, air pollutant emissions associated with the Phase One would exceed the SJVAPCD regional emissions thresholds for NO_X, PM_{10}, and $PM_{2.5}$. Emissions of NO_x that exceed the SJVAPCD regional threshold would cumulatively contribute to the O_3 nonattainment designation of the SJVAB. Emissions of PM_{10} and $PM_{2.5}$ in addition to NOx that exceed SJVAPCD's regional significance thresholds would also cumulatively contribute to the particulate matter (PM_{10} and $PM_{2.5}$) nonattainment designations of the SJVAB. Therefore, implementation of Phase One of the Specific Plan would result in a potentially significant impact because it would significantly contribute to the nonattainment designations of the SJVAB.

Table 5.2-11 Maximum Regional Operational Phase Emissions – Phase One Buildout

Sources	Criteria Air Pollutants (tons per day)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	1	<1	<1	0	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile – Passenger Vehicles[1]	4	3	32	<1	10	3
Mobile – Transport Trucks[1]	3	252	33	1	43	14
Total Annual Emissions	7	**255**	65	1	**53**	**16**
SJVAPCD Threshold	10	10	100	27	15	15
Exceeds Threshold	No	**Yes**	No	No	**Yes**	**Yes**

Source: CalEEMod, Version 2016.3.2. Based on trip generation and VMT provided by Kittelson (Appendix G1 and Appendix G2).
Notes: Manual summation of emissions for each pollutant may not equal to the shown total due to rounding. **Bold** = Exceedance.
[1] Based on calendar year 2023 aggregated emission rates derived EMFAC2017 Version 1.0.2 and CalEEMod methodology.

Specific Plan – Offsite Water Infrastructure Improvements

The proposed offsite water main improvements would not generate operation phase criteria air pollutant emissions. Therefore, no impacts are anticipated to occur.

Summary

Rule 9510

Similar to construction-related emissions, application of SJVAPCD Rule 9510 to future individual projects would contribute in reducing NO_X and particulate matter emissions. In addition, application of SJVACPD Rule 9410 would contribute in reducing mobile-source emissions. However, while SJVAPCD rules may contribute in reducing operation-related regional air quality impacts of individual projects accommodated under the Specific Plan (under both the Plan Area and Phase One buildout) activities to less than significant, the projected cumulative emissions associated with future development projects would be in exceedance. Therefore, implementation of the Specific Plan would result in a potentially significant impact because it would significantly contribute to the nonattainment designations of the SJVAB.

Health Impacts

Emissions exceeding the SJVAPCD thresholds would cumulatively contribute to the nonattainment status of the SJVAB and would contribute in elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants. Because attainment plans and supporting air model tools are regional in nature, they are not typically used to evaluate the impacts to ambient concentrations of criteria air pollutants, or to correlate those

impacts to the potential resultant impacts to public health effects, from an individual project.[12] As a result, although operation emissions would exceed the SJVAPCD thresholds for VOC, NOx, CO, PM_{10}, and $PM_{2.5}$, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited above.

The SJVAPCD is the primary agencies responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SJVAB and at the present time, it has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health in order to address the issue raised in *Sierra Club v. County of Fresno (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S21978* (Friant Ranch). Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, the usefulness of applying the available models accurately link health risks to the magnitude of emissions exceeding the significance thresholds for project-level analyses is limited.[13] To achieve the health-based standards established by the US EPA, the air districts prepare air quality management plans that details regional programs to attain the AAQS. Nonetheless, the Specific Plan (under both the Plan Area and Phase One buildout) would contribute to an increase in health effects in the basin until such time the attainment standards are met in the SJVAB.

Impact 5.2-3: Implementation of the Specific Plan would not expose sensitive receptors to substantial concentrations of air toxics. [Threshold AQ-3]

Impact Analysis: Development accommodated by the Specific Plan (under the Plan Area Buildout and Phase One Buildout) could generate new sources of criteria air pollutants and TACs in the Plan Area from area/stationary sources and mobile sources. The following describes potential localized operational air quality impacts from implementation of the Specific Plan.

Specific Plan – Plan Area Buildout

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the State 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm. The GAMAQI previously required CO hotspot monitoring. However, emissions from motor vehicles, the largest

[12] Generally, models that correlate criteria air pollutant concentrations with specific health effects focus on regulatory decision-making that will apply throughout an entire air basin or region. These models focus on the regionwide health effects of pollutants so that regulators can assess the costs and benefits of adopting a proposed regulation that applies to an entire category of air pollutant sources, rather than the health effects related to emissions from a specific proposed project or source. Because of the scale of these analyses, any one project is likely to have only very small incremental effects which may be difficult to differentiate from the effects of air pollutant concentrations in an entire air basin.

[13] For regional pollutants, it is difficult to trace a particular project's criteria air pollutant emissions to a specific health effect. Moreover, the modeled results may be misleading because the margin of error in such modeling is large enough that, even if the modeled results report a given health effect, the model is sufficiently imprecise that the actual effect may differ from the reported results; that is, the modeled results suggest precision, when in fact available models cannot be that precise on a project level.

source of CO emissions, have been declining since 1985 despite increases in VMT due to the introduction of new automotive emission controls and fleet turnover. Consequently, no CO hotspots have been reported in the SJVAB even at the most congested intersections. Furthermore, under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017). As identified in the Traffic Impact Analysis prepared for the Specific Plan (Appendix G1), implementation of the Specific Plan is not anticipated to produce the volume of traffic required to generate a CO hotspot. Therefore, implementation of the Specific Plan would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the Plan Area, and impacts would be less than significant.

Toxic Air Contaminants (TACs)

Permitted Stationary Sources

Emissions of TACs generated by stationary and point sources of emissions within the SJVAB are regulated and controlled by SJVAPCD. The Specific Plan would accommodate the types of uses (e.g., WWTF, dry cleaner, gas dispensing facilities, and light industrial) that would require a permit from SJVAPCD for emissions of TACs. Emissions of TACs from stationary sources accommodated under the Specific Plan would be controlled by SJVAPCD through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under Regulation II. According to SJVAPCD's GAMAQI, Regulation II ensures that stationary source emissions (permitted sources) would be reduced or mitigated below SJVAPCD significance thresholds of ten in one million cancer risk and one for acute risk at the maximally exposed individual. Although these sources would incrementally contribute to emissions in the Plan Area, they would be mitigated to the standards identified above.

Non-Permitted Sources

Emissions of TACs from mobile sources when operating at a property (e.g., truck idling) are regulated by statewide rules and regulations, not by SJVAPCD, and have the potential to generate substantial concentrations of air pollutants. The primary mobile source of TACs within the Plan Area is truck idling and use of off-road equipment. Trucking uses, such as trucks fueling areas, maintenance, and warehousing operations could generate substantial diesel particulate matter emissions from off-road equipment use and truck idling. In addition, some warehousing and industrial facilities may include use of transport refrigeration units (TRUs) for cold storage. New land uses that use trucks, including trucks with TRUs, could generate an increase in diesel particulate matter that would contribute to cancer and noncancer health risk in the SJVAB. Additionally, these types of facilities could also generate particulate matter (PM_{10} and $PM_{2.5}$) that may cause an exceedance or contribute to the continuing exceedance of the federal and State AAQS. However, the Specific Plan is not proximate to sensitive land uses in the SJVAB. Per CARB siting guidelines, it recommends avoiding sensitive uses within 500 feet of gas dispensing facilities and dry cleaners and 1,000 feet of distribution centers that accommodates 100 or more trucks or 40 or more TRUs per day (CARB 2005). There are no sensitive uses within these buffer distances to the Plan Area. Overall, due to the distance of the Plan Area to the nearest sensitive receptor and the fact that the majority of project-related trucks are diverted

traffic traveling on I-5 through the SJVAB, implementation of the Specific Plan would not generate substantial concentrations of air pollutants proximate to sensitive receptors.

Construction

Emissions from construction equipment primarily consist of diesel particulate matter (DPM). The OEHHA adopted new guidance for the preparation of health risk assessments in March 2015 (OEHHA 2015). It has also developed a cancer risk factor and noncancer chronic reference exposure level for DPM, but these factors are based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM. However, there are no sensitive land uses within four miles of the Plan Area. As a result, despite the increase in emissions, concentrations of DPM would not pose a threat to offsite receptors near in the Plan Area, and project-related construction health impacts would be less than significant.

Specific Plan – Phase One Buildout

Impacts identified for the Specific Plan buildout are the same as Phase One buildout. The nearest sensitive receptors to the Plan Area are over four miles away. Consequently, like the Specific Plan buildout, Phase One buildout activities would not expose sensitive receptors to substantial concentrations of air pollutants during construction or operation (permitted and non-permitted). Additionally, as identified in the Traffic Impact Analysis prepared for the Specific Plan (Appendix G1), implementation of Phase One is not anticipated to produce the volume of traffic required to generate a CO hotspot. Therefore, implementation of Phase One would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the Plan Area, and impacts would be less than significant.

Specific Plan – Offsite Water Infrastructure Improvements

Operation of the proposed offsite water main improvements would not generate criteria air pollutants and/or TACs. Therefore, no impacts are anticipated to occur.

Impact 5.2-4: Installation of the Wastewater Treatment Facility within the Plan Area has the potential to create objectionable odors that could affect a substantial number of people. [Threshold AQ-4]

Impact Analysis: The following discusses potential operation- and construction-related odor impacts associated with implementation of the Specific Plan. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine if potential odors would have a significant impact. Rather, projects must be assessed on a case-by-case basis.

Specific Plan – Plan Area Buildout

Development allowed under the Specific Plan could generate new sources of odors. Odors from the types of land uses that could generate objectionable odors (see Table 5.2-5, *SJVAB Regional Criteria Air Pollutants Significance Thresholds*) are regulated under Regulation IV, Prohibitions, Rule 4102, Nuisance, which states:

> A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Operation

The type of facilities that are considered to have objectionable odors include wastewater treatment plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. While future tenants of the Plan Area are currently unknown, future land sues of the Specific Plan would not include manufacturing operations or any of the other aforementioned types of operations (with the exception of a wastewater treatment plant) that could generate objectionable odors.

Implementation of the Specific Plan would require construction of a wastewater treatment facility (WWTF) in Phase One to serve development in the Plan Area under Phase One and all subsequent development phases. The WWTF has the potential to generate substantial nuisance odors if not properly designed and maintained. SJVAPCD Rule 4102 requires abatement of any nuisance generating an odor complaint. Typical abatement includes passing air through a drying agent followed by two successive beds of activated carbon to generate odor-free air. Additionally, as shown in Table 5.2-6, *SJVAPCD Screening Levels for Potential Odor Sources*, the SJVAPCD has identified buffer distances for common types of facilities that have been known to produce odors in the SJVAB, such as wastewater treatment plants. There are no sensitive receptors within four miles of the Plan Area; therefore, it is highly unlikely that odors associated with the project would affect sensitive receptors to the north (i.e., outside of the distances outlined in Table 5.2-6). However, operation of the WWTF is considered potentially significant in the absence of an Odor Management Plan.

Construction

During construction activities of development projects accommodated by the Specific Plan, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. However, any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reached any sensitive receptor, which are over four miles away, they would be diluted to well below any level of air quality concern. Furthermore, short-term construction-related odors are expected to cease upon the drying or hardening of odor-producing materials. Therefore, impacts associated with construction-generated odors are considered less than significant.

Specific Plan – Phase One Buildout

The impacts identified for the Specific Plan buildout are applicable to the Phase One buildout activities. Impacts associated with construction-generated odors are considered less than significant. The WWTF would be constructed in Phase One, as note above. As also noted above, there are no sensitive receptors within four

miles of the Plan Area; therefore, it is highly unlikely that odors associated with the project would affect sensitive receptors to the north (i.e., outside of the distances outlined in Table 5.2-6). However, operation of the WWTF is considered potentially significant in the absence of an Odor Management Plan.

Specific Plan – Offsite Water Infrastructure Improvements

Operation of the proposed offsite water main improvements would not generate odors. Therefore, no impacts are anticipated to occur. Regarding construction, the impacts identified for the Specific Plan-Plan Area Buildout are applicable here. As discussed above, impacts associated with construction-generated odors are considered less than significant.

Impact 5.2-5: The Specific Plan has the potential to conflict with the SJVAPCD's air quality management plans. [Threshold AQ-4]

Impact Analysis: The following describes potential air quality impacts and consistency with the Specific Plan (under the Plan Area Buildout and Phase One Buildout) with the air quality management plans (AQMPs) developed by the SJVAPCD.

Specific Plan – Plan Area Buildout

The SJVAPCD is responsible for reducing emissions from area, stationary, and mobile sources in the SJVAB to achieve the National and California AAQS. A consistency determination with the AQMPs play an important role in local agency project review by linking local planning and individual projects to the AQMPs. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the AQMPs.

KCAG is one of SJVAPCD's partners in the preparation of the AQMPs, providing the latest economic and demographic forecasts and developing transportation measures in Kings County. Regional population, housing, and employment projects developed by KCAG are based, in part, on the County's General Plan land use designations. These projections form the foundation for the emissions inventory of the AQMPs and are incorporated into the regional transportation plan/sustainable communities strategy (RTP/SCS) prepared by KCAG to determine priority transportation projects and vehicle miles traveled in the KCAG region. Because the AQMPs strategies are based on projections from local general plans, projects that are consistent with the local general plan are considered consistent with the air quality-related regional plan. Additionally, only large projects have the potential to substantially affect the demographic forecasts in the AQMPs.

The Specific Plan does not include housing units and would not generate additional population growth. However, as shown in Table 3-2, *Jackson Ranch Specific Plan Land Use Statistical Summary*, of Chapter 3, *Project Description*, the Specific Plan would generate 1,464 employees; however, the employment growth would be within the County's growth forecast. Thus, implementation of the Specific Plan would not have the potential to substantially affect demographic projections beyond what is accounted for in the current growth projections.

While the Specific Plan would not exceed regional growth forecasts, the Plan Area is intended to serve as a commercial hub for travelers along Interstate 5 (I-5). As a result, the Specific Plan is anticipated to draw a larger percentage of truck traffic as the Plan Area is the midway point between Los Angeles and San Francisco. As identified in Impact 5.2-1 (construction) and Impact 5.2-2 (operation), implementation of the Specific Plan would generate emissions of criteria air pollutants that would exceed SJVAPCD's significance thresholds, which were established to determine whether a project has the potential to cumulatively contribute to the SJVAB's nonattainment designations. Thus, implementation of the Specific Plan would result in an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of the AAQS. Therefore, overall, the Specific Plan would be considered inconsistent with the AQMPs.

The vast majority of the Specific Plan's NO_x emissions are from the transportation sector, and over 88 percent of the emissions are associated with VMT generated by trucks. In general, the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast with the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

Emissions associated with heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The following state strategies reduce criteria air pollutants and GHG emissions from the medium and heavy duty trucks:

- CARB's Mobile Source Strategy focuses on reducing emissions through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks (CARB 2017).

- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25 percent by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030 (CARB 2017).

- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions.

In addition, the US EPA and CARB are currently in the rule development processes for the follow strategies:

- Under the US EPA Cleaner Truck Initiative, the US EPA has committed to updating its truck engine standard to reduce NOx emissions.

- CARB's Transport Refrigeration Unit Regulation reduces residual risk from TRUs by transitioning to zero-emission technologies.
- CARB's Advanced Clean Truck Rule requires truck manufacturers to sell an increasing percentage of zero-emission trucks by 2030 (up to 15 percent or 50 percent, depending on truck type). Also, this proposed rule would require one-time fleet reporting for large businesses.
- CARB's Zero-Emission Fleet Rule would require some fleets to transition to zero-emissions.
- CARB's Heavy-Duty Low NOx Program would set new statewide engine standards, test cycles, and warranty and durability requirements to reduce NOx from trucks.
- CARB's Heavy-Duty Inspection/Maintenance Program would set new inspection and maintenance requirements to ensure emissions controls are functioning properly.

Thus, these strategies would contribute in controlling heavy duty truck emissions associated with the Specific Plan. The Specific Plan would not conflict with these strategies. Trucks onsite are also required to comply with CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation, which requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated emissions.

Summary

Despite the anticipated regulations implemented by the US EPA and CARB to improve truck efficiency, the Specific Plan would represent a substantial increase in emissions compared to existing conditions. The estimated long-term emissions generated under buildout of the Specific Plan would exceed the SJVAPCD's regional construction (Impact 5.2-1) and operational (Impact 5.2-2) significance thresholds and would cumulatively contribute to the nonattainment designations in the SJVAB. Therefore, the Specific Plan would be considered inconsistent with the SJVAPCD's AQMPs, resulting in a significant impact in this regard.

Specific Plan – Phase One Buildout

Impacts identified for the Specific Plan buildout are the same as for Phase One buildout. Despite the anticipated regulations implemented by the US EPA and CARB to improve truck efficiency, Phase One of the Specific Plan would represent a substantial increase in emissions compared to existing conditions. The estimated long-term emissions generated by Phase One would exceed the SJVAPCD's regional construction (Impact 5.2-1) and operational (Impact 5.2-2) significance thresholds and would cumulatively contribute to the nonattainment designations in the SJVAB. Therefore, buildout of Phase One would be considered inconsistent with the SJVAPCD's AQMPs, resulting in a significant impact in this regard.

Specific Plan – Offsite Water Infrastructure Improvements

The proposed water main improvements are infrastructure improvements that do not have the potential to conflict with the SJVAPCD's AQMPs. Therefore, no impacts are anticipated to occur.

5.2.4 Cumulative Impacts

The SJVAB is designated nonattainment for O_3 and $PM_{2.5}$ under the California and National AAQS and nonattainment for PM_{10} under the California AAQS. Ozone is created by chemical reactions between NO_X and volatile organic compounds; thus, NO_X and VOCs are precursor to O_3. In accordance with SJVAPCD's methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Cumulative projects include planned projects in other areas of the County in accordance with the projections of the Kings County General Plan, and general growth in the Plan Area under the Specific Plan. The greatest source of emissions in the SJVAB is mobile sources. Due to the extent of the area potentially impacted from cumulative emissions (i.e., the SJVAB), SJVAPCD considers a project cumulatively significant when project-related emissions exceed the SJVAPCD regional emissions thresholds shown in Table 5.2-5.

Construction

Construction of cumulative projects will further degrade the regional and local air quality. The Specific Plan would create a cumulative considerable contribution of VOC and NOx that would contribute to the SJVAB's ozone nonattainment during construction. Therefore, the Specific Plan's contribution to cumulative air quality impacts would be cumulatively considerable.

Operation

Operation of the Specific Plan after incorporation of mitigation would still result in emissions in excess of the SJVAPCD regional emissions thresholds. Therefore, the air pollutant emissions associated with the Specific Plan would be cumulatively considerable and therefore significant.

5.2.5 Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to air quality apply to the Specific Plan and are described in detail in Section 5.2.1.1, *Regulatory Background*, above and/or on the SJVAPCD Current Rules and Regulations webpage for the specific SJVAPCD rules[14]

- SJVAPCD Rule 2010 – Permits Required (Authority to Construct and Permit to Operate)
- SJVAPCD Rule 4101 – Visible Emissions
- SJVAPCD Rule 4102 – Nuisance
- SJVAPCD Rules 4201 and 4202 – Particulate Matter Concentration and Emission Rate
- SJVAPCD Rule 4601 – Architectural Coatings
- SJVAPCD Regulation VIII – Fugitive PM10 Prohibitions (Rules 8011 through 8081)

[14] San Joaquin Valley Air Pollution Control District. Current District Rules and Regulations. https://www.valleyair.org/rules/1ruleslist.htm

- SJVAPCD Rule 9410 – Employer Based Trip Reduction
- SJVAPCD Rule 9510 – Indirect Source Review.
- CARB Rule 2480 (13 CCR 2480): Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools: limits nonessential idling for commercial trucks and school buses within 100 feet of a school.
- CARB Rule 2485(13 CCR 2485): Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling: limits nonessential idling to five minutes or less for commercial trucks.
- CARB Rule 2449(13 CCR 2449): In-Use Off-Road Diesel Idling Restricts: limits nonessential idling to five minutes or less for diesel-powered off-road equipment.
- Building Energy Efficiency Standards (Title 24)
- Appliance Energy Efficiency Standards (Title 20)
- Motor Vehicle Standards (AB 1493)

5.2.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.2-3.

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

- **Impact 5.2-1** Construction activities associated with the Specific Plan would result in emissions that exceed the SJVAPCD's significant criteria and would cumulatively contribute to the nonattainment designation and health impact in the SJVAB.
- **Impact 5.2-2** Long-term operation of the Specific Plan would result in emissions that exceed the SJVAPCD's significant criteria and would cumulatively contribute to the nonattainment designation and health impact in the SJVAB.
- **Impact 5.2-4** Development of the Wastewater Treatment Facility within the Plan Area has the potential to create objectionable odors that could affect a substantial number of people.
- **Impact 5.2-5** The Specific Plan has the potential to conflict with the SJVAPCD's air quality management plans.

5.2.7 Mitigation Measures

Impact 5.2-1

Specific Plan – Plan Area Buildout

AQ-1 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall require their construction contractors to use equipment that meets the United States Environmental Protection Agency's (US EPA) Tier 4 Final emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower, unless it can be demonstrated to the Kings County that such equipment is not available. Where equipment is not available, the next available engine Tier (e.g., US EPA Tier 4 Interim equipment) shall be used. Any emissions-control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 4 emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations.

Prior to construction, the project engineer shall ensure that all construction (e.g., demolition and grading) plans clearly show the requirement for EPA Tier 4 emissions standards for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the Kings County Community Development Agency. The construction equipment list shall state the makes, models, Equipment Identification Numbers, and number of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. The reporting and maintenance records shall be available for inspection during construction and remain available for at least two years after completion of construction. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to 5 minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

AQ-2 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall require their construction contractors to use low volatile organic compound (VOC) paints (i.e., paints with a VOC content of 50 grams per liter or less) for all interior and exterior coatings. This requirement shall be noted on all construction management plans verified by the Kings County prior to issuance of any construction permits and during interior coating activities and verified by the Kings County Community Development Agency during construction activities.

Specific Plan – Phase One Buildout

No mitigation measures are required.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

Impacts 5.2-2

Specific Plan – Plan Area Buildout

Off-Road Equipment

AQ-3 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall require that off-road equipment (e.g., yard trucks/hostlers and forklifts) utilized onsite for daily warehouse and business operations be non-diesel and powered by a clean energy source such as natural gas, electricity, hydrogen, etc. If the property is leased, then the property/facility owner shall disclose this requirement to all tenants/business entities and the requirement shall be included in any lease agreement.

AQ-4 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall design all truck/dock bays that serve cold storage facilities within the proposed buildings to be electrified to facilitate plug-in capability and support use of electric standby and/or hybrid electric transport refrigeration units. All site and architectural plans submitted to the Kings County Community Development Agency shall note all the truck/dock bays designated for electrification.

AQ-5 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall require electric standby and/or hybrid electric transport refrigeration units (E/S TRUs) be utilized onsite for daily warehouse and business operations for all tenants/business entities that own or would own their own fleet to be used as part of the business operations. Additionally, all E/S TRUs shall comply with the California Air Resources Board's "Alternative Technology" requirements under Section 2477(e)(1)(A)(3) of the California Code of Regulations, Title 13, Article 8, Chapter 9, Division 3. If the property is leased, then the property/facility owner shall disclose these requirements to all tenants/business entities and the requirement shall be included in any lease agreement.

AQ-6 To reduce idling emissions from transport trucks, signage shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations (e.g., Rule 2485). At minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict non-essential idling to no more than five (5) consecutive minutes; and 3) telephone numbers of the building facilities manager and CARB to report violations. All signage shall be made of weather-proof materials. All site and architectural plans submitted to the Kings County (County) Community Development Agency shall note the locations of these signs. Prior to issuance of occupancy permits, the County shall verify the installation of these signs.

Transportation

AQ-7 Applicants for development projects in the area covered by the Jackson Ranch Specific Plan shall plan for the necessary infrastructure (e.g., conduit in parking lots) to support the future transition to zero emissions and near zero emission trucks. These requirements shall be noted on all site plans and verified by the Kings County Community Development Agency.

Specific Plan – Phase One Buildout

Mitigation Measures AQ-3 through AQ-7 also apply here.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

Impact 5.2-4

Specific Plan – Plan Area Buildout

AQ-8 An odor management plan shall be prepared for the onsite Wastewater Treatment Facility that would be developed to serve the wastewater needs of the Jackson Ranch Specific Plan. The odor management plan shall outline steps to comply with the San Joaquin Valley Unified Air Pollution Control District Rule 4102 for nuisance odors. The odor management plan shall identify the best available control technologies for toxics (T-BACTs) that will be utilized to reduce potential odors to acceptable levels, including appropriate enforcement mechanisms. T-BACTs may include, but are not limited to scrubbers (i.e., air pollution control devices) at the industrial facility. T-BACTs identified in the odor management plan shall be incorporated into the site plan. The odor management plan shall be submitted to the Kings County Community Development Agency prior to the commencement of operations.

Specific Plan – Phase One Buildout

Mitigation Measure AQ-8 also applies here.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

Impact 5.2-5

Specific Plan – Plan Area Buildout

Mitigation Measures AQ-1 through AQ-7 are applicable to Impact 5.2-5 and would lessen impacts associated with inconsistency of the Specific Plan with the applicable air quality management plans.

Specific Plan – Phase One Buildout

Mitigation Measures AQ-1 through AQ-7 also apply here.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

5.2.8 Level of Significance After Mitigation

Impact 5.2-1

Buildout of the Specific Plan would occur over a period of approximately 20 years or longer. Construction activities associated with buildout of the Specific Plan could generate short-term emissions that exceed the SJVAPCD's significance thresholds during the construction phases and cumulatively contribute to the nonattainment designations of the SJVAB. Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce criteria air pollutant emissions from construction-related activities to the extent feasible. However, as shown in Table 5.2-12, despite incorporation of mitigation, construction activities associated with the development phases after Phase One would still exceed the NOx significance threshold. In addition, construction time frames and equipment for site-specific development projects are not available at this time and there is a potential for multiple development projects to be constructed at one time, resulting in significant construction-related emissions. Therefore, despite implementation of Mitigation Measure AQ-1 and AQ-2, Impact 5.2-1 with respect to the Specific Plan – Plan Area Buildout, would remain ***significant and unavoidable***.

Table 5.2-12 Regional Construction Emissions: Mitigated

Construction Year	Pollutants (tons per year)[1]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Specific Plan – Phase One[2]						
Year 2021	1	7	6	<1	1	1
Year 2022	1	4	4	<1	1	<1
Year 2023	2	3	3	<1	1	<1
Maximum Annual Emissions	2	7	6	<1	1	1
SJVAPCD Threshold	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Specific Plan – Plan Area Buildout[3]						
Year 2024	8	16	24	<1	7	2
Year 2025	2	11	13	<1	5	1
Year 2026	1	10	11	<1	4	1
Year 2027	1	10	11	<1	4	1
Year 2028	1	10	10	<1	4	1
Year 2029	1	10	10	<1	4	1
Year 2030	1	9	9	<1	4	1
Year 2031	1	9	9	<1	4	1
Year 2032	1	9	9	<1	4	1
Year 2033	1	9	8	<1	4	1
Year 2034	1	9	8	<1	4	1
Year 2035	1	9	8	1	4	1

Table 5.2-12 Regional Construction Emissions: Mitigated

Construction Year	Pollutants (tons per year)[1]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 2036	1	6	5	<1	3	1
Maximum Annual Emissions	8	16	24	1	7	2
SJVAPCD Threshold	10	10	100	27	15	15
Significant?	No	**Yes**	No	No	No	No

Source: CalEEMod Version 2016.3.2
Notes: **Bold** = Exceedance
[1] Incorporates Mitigation Measures AQ-1 and AQ-2. Based on these measures, interior and exterior building paints have a VOC content of 50 g/L or less and off-road construction equipment of 50 horsepower or more meet the Tier 4 Interim emissions standards.
[2] Durations are based on the CalEEMod default construction durations normalized to a three-year buildout duration (i.e., 2021 through 2023).
[3] Durations are based on the CalEEMod default construction durations normalized to a 17-year buildout duration (i.e., 2024 through 2040).

Impact 5.2-2

Buildout in accordance with the Specific Plan would generate long-term emissions that would exceed SJVAPCD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SJVAB. Mitigation Measures AQ-3 through AQ-7 would reduce emissions to the extent feasible. However, Impact 5.2-2 would remain ***significant and unavoidable*** due to the magnitude of the overall land use development associated with the Specific Plan under both the Plan Area and Phase One buildout.

Impact 5.2-4

Mitigation Measure AQ-8 would ensure that an Odor Management Plan would be prepared to reduce and manage odors associated with the WWTF. With implementation of Mitigation Measure AQ-8 and because of the distance of the nearest sensitive receptor to the proposed WWTF, odor impacts would be *less than significant*.

Impact 5.2-5

The Specific Plan would be inconsistent with the SJVAPCD's AQMPs because development accommodated by the Specific Plan would cumulatively contribute to the nonattainment designations of the SJVAB. Mitigation Measures AQ-1 through AQ-7 are applicable to Impact 5.2-5 and would lessen impacts associated with inconsistency of the Specific Plan with the applicable air quality management plans. However, due to the magnitude and scale of the land uses that would be developed, no mitigation measures are available that would reduce operation and construction impacts below SJVAPCD thresholds. Therefore, Impact 5.2-5 with respect to both the Plan Area and Phase One buildout, would remain ***significant and unavoidable***.

5.2.9 References

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5.3 BIOLOGICAL RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Jackson Ranch Specific Plan (Specific Plan) to impact biological resources in unincorporated Kings County—specifically, in the area covered by the Specific Plan (Plan Area) and its surroundings. The analysis in this section is based in part on the following technical report:

- *Biological Technical Report – Jackson Ranch Specific Plan*, ECORP Consulting, Inc., 2019

A complete copy of this technical report is included in Appendix D of this DEIR.

5.3.1 Environmental Setting

5.3.1.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, or guidelines related to archeological resources that are applicable to the Specific Plan are summarized below.

Federal

Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973, as amended, protects, and conserves any species of plant or animal that is endangered or threatened with extinction, as well as the habitats where these species are found. "Take" of endangered species is prohibited under Section 9 of the FESA. "Take" means to "harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Section 7 of the FESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) on proposed federal actions that may affect any endangered, threatened, or proposed (for listing) species or critical habitat that may support the species. Section 4(a) of the FESA requires that critical habitat be designated by the USFWS "to the maximum extent prudent and determinable, at the time a species is determined to be endangered or threatened." FESA provides guidance for planners/managers and biologists by indicating locations of suitable habitat and where preservation of a particular species has high priority. Section 10 of the FESA provides the regulatory mechanism for incidental take of a listed species by private interests and nonfederal government agencies during lawful activities. Habitat conservation plans (HCPs) for the impacted species must be developed in support of incidental take permits to minimize impacts to the species and formulate viable mitigation measures.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) affirms and implements the United States' commitment to four international conventions—with Canada, Japan, Mexico, and Russia—to protect shared migratory bird resources. The MBTA governs the take, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these items, except under a valid permit or as permitted in the implementing regulations. USFWS administers permits to take migratory birds in accordance with the MBTA.

Clean Water Act, Section 404

The United States Army Corps of Engineers (Corps) regulates discharge of dredged or fill material into "waters of the United States."[1] Any filling or dredging within waters of the United States requires a permit, which entails assessment of potential adverse impacts to Corps wetlands and jurisdictional waters and any mitigation measures that the Corps requires. Section 7 consultation with USFWS may be required for impacts to a federally listed species. If cultural resources may be present, Section 106 review may also be required. When a Section 404 permit is required, a Section 401 Water Quality Certification is also required from the Regional Water Quality Control Board (RWQCB).

Clean Water Act, Sections 401 and 402

Section 401(a)(1) of the Clean Water Act (CWA) specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal permitting agency with a certification, issued by the state in which the discharge originates, that any such discharge will comply with the applicable provisions of the CWA. In California, the applicable RWQCB must certify that the project will comply with water quality standards. Permits requiring Section 401 certification include Corps Section 404 permits and National Pollutant Discharge Elimination System (NPDES) permits issued by the Environmental Protection Agency (EPA) under Section 402 of the CWA. NPDES permits are issued by the applicable RWQCB. Kings County is in the jurisdiction of the Central Valley RWQCB (Region 5).

State

California Fish and Game Code

Section 1600

Section 1600 of the California Fish and Game Code requires a project proponent to notify the California Department of Fish and Wildlife (CDFW) of any proposed alteration of streambeds, rivers, and lakes. The intent is to protect habitats that are important to fish and wildlife. CDFW may review and place conditions on the project, as part of a Streambed Alteration Agreement (SAA), that address potentially significant adverse impacts within CDFW's jurisdictional limits.

Streambed Alteration Agreement

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is the SAA. Often,

[1] "Waters of the United States," as applied to the jurisdictional limits of the Corps under the Clean Water Act, includes all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the tide; all interstate waters, including interstate wetlands; and all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds whose use, degradation, or destruction could affect interstate or foreign commerce; water impoundments; tributaries of waters; territorial seas; and wetlands adjacent to waters. The terminology used by Section 404 of the Clean Water Act includes "navigable waters," which is defined at Section 502(7) of the act as "waters of the United States, including the territorial seas."

projects that require an SAA also require a permit from the United States Army Corps of Engineers under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the SAA may overlap.

Migratory Birds

CDFW enforces the protection of nongame native birds in §§ 3503, 3503.5, and 3800 of the California Fish and Game Code. Section 3513 of the California Fish and Game Code prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California nongame native birds' nests and make it unlawful to take these birds. All raptor species are protected from "take" pursuant to California Fish and Game Code § 3503.5 and are also protected at the federal level by the MBTA.

Fully Protected Species

The state of California first began to designate species as "fully protected" prior to the creation of the federal and California Endangered Species Acts (ESAs). Lists of fully protected species were initially developed to provide protection to those animals that were rate or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have been listed as threatened or endangered under federal and/or California ESAs. The regulations that implement the Fully Protected Species Statue (California Fish and Game Code § 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

California Endangered Species Act

The California Endangered Species Act (CESA; California Fish and Game Code § 2050-2116)) generally parallels the main provisions of the FESA and is administered by CDFW. Its intent is to prohibit take and protect state-listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, CESA also applies the take prohibitions to species petitioned for listing (state candidates). Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the California Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species. Under certain conditions, CESA has provisions for take through a 2081 permit or memorandum of understanding. In addition, some sensitive mammals and birds are protected by the state as "fully protected species." California "species of special concern" are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's California Natural Diversity Database (CNDDB), which maintains a record of known and recorded occurrences of sensitive species. Informally listed taxa are not protected per se but warrant consideration in the preparation of biological resources assessments.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in California." The NPPA is

administered by CDFW. The California Fish and Game Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The CESA provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

Local

Kings County General Plan

The Resource Conservation Element of the Kings County General Plan provides goals, objectives, and policies pertaining to biological resources, particularly plant and animal habitats and threatened and endangered species, which include.

- **RC Goal D1:** Preserve land that contains important natural plant and animal habitats.
  - **RC Objective D1.1:** Require that development in or adjacent to important natural plant and animal habitats minimize the disruption of such habitats.
- **RC Goal D3:** Protect and manage riparian environments as valuable resources.
  - **RC Objectives D3.1:** Ensure that, in development decisions affecting riparian environments, the conservation of fish and wildlife habitat and the protection of scenic qualities are balanced with other purposes representing basic health, safety, and economic needs.
- **RC Goal E1:** Balance the protection of the County's diverse plant and animal communities with the County's economic needs.
  - **RC Objective E1.1:** Require mitigation measures to protect important plant and wildlife habitats.

5.3.1.2 EXISTING CONDITIONS

The Plan Area primarily consists of active and fallow agricultural land or rangeland, and agricultural production consists mainly of irrigated crops such as almonds, pistachios, and stone fruits (apricots and plums). Dry grazing also occurs onsite; portions of the Plan Area contain an orchard of almonds trees near the end of their productive life expectancy. A portion of the Plan Area consists of disked lands formerly planted as orchards (see Figure 3-3, *Aerial Photograph*). Power lines on wooden poles line the norther site boundary, abutting Utica Avenue, and traverse the entire stretch of the central portion of the Plan Area from the northern to southern boundary.

Plant Communities/Habitat

Plants

Vegetation within the Plan Area consists primarily of nonnative grasses and weeds as well as an orchard used for agricultural production. No native vegetation communities are present in the Plan Area. Plant species observed within the Plan Area are typical of the fallow and active agricultural land present in the Plan Area,

which consisted mostly of active orchard, and the fallow agricultural land is mostly devoid of native vegetation. Vegetation in the Plan Area is mostly limited to nonnative grasses and forbs, including mustard (*Brassica nigra*), Russian thistle (*Salsola tragus*), red-stemmed filaree (*Erodium cicutarium*). Other plant species in the Plan Area include the following: fiddleneck (*Amsinckia menziesii*), cheatgrass (*Bromus tectorum*), red brome (*Bromus madritnesis*), lupine (*Lupinus sp.*), pistachio (*Pistacia vera*), almond (*Prunus sp.*), wheat (*Triticum sp.*) (ECORP 2019).

Wildlife

The fallow and active agricultural land in the Plan Area do not provide substantial habitat for native wildlife species; however, the following wildlife species were observed during the field survey conducted of the Plan Area: common raven (*Corvus corax*), house finch (*Haemorhus mexicanus*), red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), killdeer (*Charadrius vociferous*), northern mockingbird (*Mimus polyglottos*), black phoebe (*Sayornis nigricans*), Eurasian collared dove (*Streptopelia decaocto*), western meadowlark (*Sturnella neglecta*), and European starling (*Sturnus vulgaris*) (ECORP 2019).

Sensitive Resources

According to the biological technical report prepared for the Plan Area (Appendix D), the literature review and database searches resulted in 7 special-status plant species and 15 special-status wildlife species that could occur on and/or near the Plan Area (ECORP 2019). The plant and wildlife species are described below.

Sensitive Plants

Table 5.3-1 lists the seven special-status plant species identified to be present on and/or near the Plan Area.

Table 5.3-1 Special-Status Plant Species Potentially Present on and/or near the Plan Area

Scientific Name	Common Name	Federal/State Status	CNPS
Atriplex coronate var. *vallicola*	Lost Hills crownscale	None/None	1B.2
Caulanthus californicus	California jewelflower	END/END	1B.1
Caulanthus lemmonii	Lemmon's jewelflower	None/None	1B.2
Delphinium recurvatum	Recurved larkspur	None/None	1B.2
Eremalche parryi ssp. *kernesis*	Kern mallow	END/None	1B.2
Monolopia congdonii	San Joaquin woollythreads	END/None	1B.2
Tropidocarpum californicum	King's gold	None/None	1B.1

Source: ECORP 2019.

FED: Federal Classifications

END	Taxa listed as endangered
THR	Taxa listed as threatened
PE	Taxa proposed to be listed as endangered
PT	Taxa proposed to be listed as threatened
C2*	USFWS may, in the future, designate such taxa as Candidates. (*) indicates those C2 candidates that were removed from the list.
C	Candidate for listing.
ND	Not designated as a sensitive species

STATE: State Classifications

END	Taxa listed as endangered
THR	Taxa listed as threatened
CE	Candidate for endangered listing
CT	Candidate for threatened listing
SCS	California Species of Special Concern.
ND	Not designated as a sensitive species

CNPS: California Native Plant Society Classifications

1A Plants presumed by CNPS to be extinct in California; 1B Plants considered by CNPS to be rare or endangered in California and elsewhere; 2 Plants considered by CNPS to be rare, threatened or endangered in California, but which are more common elsewhere; 3 Review list of plants suggested by CNPS for consideration as endangered but about which more information is needed; 4 Watch list of plants of limited distribution whose status should be monitored.

Sensitive Wildlife

Table 5.3-2 lists the special-status animal species identified to be present on and/or near the Plan Area.

Table 5.3-2 Special-Status Animal Species Potentially Present on and/or near the Plan Area

Common Name	Habitat	Presence	Federal/State Status
Wildlife Species with a High Potential to Occur			
Burrowing owl	Dry open areas with few trees and short grasses; near vacant lots near human habitation.	The Plan Area contains suitable open habitat within the fallow agriculture fields and along the edges of the orchards. The soils within the Plan Area are also suitable for burrowing, and California ground squirrels, for which burrowing owls sometimes rely for burrows, were observed on and adjacent to the Plan Area. The fallow and active agriculture land is likely to support a robust insect population and the nonnative grassland habitat adjacent to the Plan Area along the aqueduct likely supports an adequate number of small mammals and insects that make up most of the burrowing owls' prey base.	None/SCS
San Joaquin Kit Fox	Annual grasslands or open grassy areas with scattered shrubs and requires loose soils for digging burrows; scattered throughout San Joaquin Valley, and individuals have been known to occasionally use agricultural land and other areas of marginal habitat adjacent to high-quality habitat for foraging or movement to other areas of their territory.	The Plan Area, consisting partially of fallow agriculture land, contains soft soils suitable for denning and the nonnative grassland habitat adjacent to the Plan Area along the aqueduct likely supports an adequate prey base of small mammals for foraging. The Plan Area itself, consisting of orchards and fallow agriculture land supports marginally suitable foraging and denning habitat.	END/THR
Wildlife Species with a Moderate Potential to Occur			
San Joaquin (Nelson's) Antelope Squirrel	Grassland and scrubland communities; most prevalent in habitats with sparse to moderate shrub cover and are most often found in saltbush scrub communities.	The Plan Area, consisting of fallow and active agricultural land, does not represent suitable habitat for the San Joaquin antelope squirrel, but the grassland habitat adjacent to the Plan Area along the aqueduct is suitable for the species. Numerous small mammal burrows of the appropriate size for San	None/THR

Table 5.3-2 Special-Status Animal Species Potentially Present on and/or near the Plan Area

Common Name	Habitat	Presence	Federal/State Status
		Joaquin antelope squirrel were observed within the grassland habitat and along the road that runs along the southwest border of the Plan Area.	
Loggerhead shrike	Open areas with scattered trees and shrubs including desert scrub, grasslands, and open woodland habitats.	Suitable foraging habitat is present throughout the Plan Area and suitable nesting habitat is present within the orchards onsite.	None/SCS
American badger	Dry open areas consisting of shrubs, grasslands, forest, and herbaceous habitats, with loose soils for digging burrows; scattered throughout the San Joaquin Valley, and individuals have been known to occasionally use agricultural land and other areas of marginal habitat adjacent to high-quality habitat for foraging and movement to other areas of their territory.	The Plan Area, consisting partially of fallow agriculture land, contains soft soils suitable for denning and the nonnative grassland habitat adjacent to the Plan Area along the aqueduct likely supports an adequate prey base of small mammals for foraging	None/SCS
Wildlife Species with a Low Potential to Occur			
Tricolored blackbird	Breeding habitat includes wet and dry vernal pools, seasonal wetlands, and freshwater mashes with cattails, bulrush, and sedges. Nests are typically found in vegetation of mashes or thickets. Foraging habitats include grasslands and agricultural land.	No suitable nesting habitat was identified within the Plan Area, but marginally suitable foraging habitat is present.	None/SCS (candidate END)
San Joaquin coachwhip	Open, dry, treeless areas, including grassland and valley saltbush scrub.	The Plan Area, consisting of fallow and active agriculture, did not represent suitable habitat for this species. The grassland adjacent to the Plan Area is considered suitable.	None/SCS
Wildlife Species Presumed Absent			
Swainson's hawk	Solitary trees for nesting and large, flat, open grasslands or agricultural land for foraging.	The active orchard on the Plan Area does not represent suitable nesting habitat and the fallow agriculture land, mostly devoid of vegetation and frequently disked, did not support an adequate prey base to be considered suitable foraging habitat.	None/THR
Western snowy plover	Beaches, dry mud or salt flats, and sandy shores of rivers, lakes, and ponds.	No suitable habitat for this species is identified within the Plan Area.	THR/SCS
Giant Kangaroo rat	Low growing grassland and shrub communities on a variety of soil types.	The Plan Area, consisting of active and fallow agriculture land, is not suitable for the species and the grassland habitat adjacent to the Plan	END/END

Table 5.3-2 Special-Status Animal Species Potentially Present on and/or near the Plan Area

Common Name	Habitat	Presence	Federal/State Status
		Area is too dense to support giant kangaroo rats. No precincts were observed within the grassland habitat adjacent to the Plan Area.	
Short-nosed kangaroo rat	Flat to gently sloping terrain; this species is typically associated with desert shrub habitats, and often associates with saltbush scrub.	The Plan Area, consisting of active and fallow agriculture completely devoid of shrubs, does not represent suitable habitat for short-nosed kangaroo rats.	None/SCS
Tipton kangaroo rat	Alluvial fan and floodplain soils with sparsely vegetated woody shrub cover. Can occur in terrace grasslands devoid of woody shrubs, sparse-to-moderate shrub cover.	The Plan Area, consisting of active and fallow agriculture completely devoid of shrubs, does not represent suitable habitat for Tipton kangaroo rat.	END/END
Blunt-nosed leopard lizard	Open, sparsely vegetated areas and is often associated with valley saltbush scrub and grassland habitats; prefer bare ground or low growing vegetation.	The Plan Area, consisting of active and fallow agriculture, does not contain suitable habitat for the species. The grassland habitat adjacent to the Plan Area is too dense to support blunt-nosed leopard lizards.	END/END
Tulare grasshopper mouse	Scattered shrubs with annual grass and forbs; most often found in saltbush scrub communities.	The Plan Area, consisting of fallow and active agriculture completely devoid of shrubs, would not be considered suitable habitat for this species.	None/SCS
Western Spadefoot Toad	Grassland habitats; can occupy habitat that includes open areas with sandy or gravelly soils within mixed woodlands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alkali flats, and foothills. Requires standing water for more than 30 days that does not contain bullfrogs, fish, or crayfish.	The Plan Area, consisting of fallow and active agriculture, would not be considered suitable habitat for this species as they require standing water for more than 30 days that does not contain bullfrogs, fish, or crayfish.	None/SCS

Source: ECORP 2019.

FED: Federal Classifications
END Taxa listed as endangered
THR Taxa listed as threatened
PE Taxa proposed to be listed as endangered
PT Taxa proposed to be listed as threatened
C2* USFWS may, in the future, designate such taxa as Candidates. (*) indicates those C2 candidates that were removed from the list.
C Candidate for listing.
None Not designated as a sensitive species

STATE: State Classifications
END Taxa listed as endangered
THR Taxa listed as threatened
CE Candidate for endangered listing
CT Candidate for threatened listing
CFP California Fully Protected.
SCS California Species of Special Concern.
SA Special Animal. Taxa of concern to the California Natural Diversity Data Base regardless of their current legal or protected status.
None Not designated as a sensitive species

Raptors and Migratory Birds

Potential nesting habitat for migratory birds and raptors protected by the MBTA and California Fish and Game Code is present within the orchard and vegetation suitable for nesting birds was also observed immediately adjacent to the Plan Area. Raptors typically breed between February and August, and songbirds and other passerines generally nest between March and August (ECORP 2019).

Wildlife Movement Corridors

Wildlife movement corridors can be local or regional in scale; their functions may vary temporally and spatially based on conditions and species present. Wildlife corridors represent areas where wildlife movement is concentrated due to natural or anthropogenic constraints. Local corridors provide access to resources such as food, water, and shelter. Animals use these corridors, which are often hillsides or riparian areas, to move between different habitats. Regional corridors provide these functions and link two or more large habitat areas. They provide avenues for wildlife dispersal, migration, and contact between otherwise distinct populations.

The Plan Area consists of active and fallow agriculture which is very disturbed; the areas of fallow agriculture are devoid of vegetative cover, very exposed, and do not contain any features that typically are associated with facilitating wildlife movement (ECORP 2019).

Jurisdictional Waters and Wetlands

No jurisdictional drainages, stream courses, and/or water features were identified in the Plan Area. No hydric soils or riparian vegetation were identified onsite (ECORP 2019).

5.3.2 Thresholds of Significance

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

B-1 Have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

B-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

B-3 Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

B-4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

B-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

B-6 Conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would have no impact:

- Threshold B-2
- Threshold B-3
- Threshold B-5
- Threshold B-6

These impacts will not be addressed in the following analysis.

5.3.3 Environmental Impacts

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

Impact 5.3-1: Implementation of the Specific Plan could impact special-status species. [Threshold B-1]

Impact Analysis. Following is a discussion of the potential impacts to biological resources as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Special-Status Wildlife Species

The biological technical report (Appendix D) identified 15 special-status wildlife species that occur on or near the Plan Area (see Table 5.3-2, *Special-Status Animal Species Potentially Present on and/or near the Plan Area*); however, due to the disturbed nature of the Plan Area and its long agricultural history, and the current lack of suitable habitat for special-status species within the Plan Area, eight of the special-status wildlife species identified were presumed absent from the Plan Area (ECORP 2019).

The remaining special-status wildlife species (described below) have varying levels of potential to occur in the Plan Area based on the presence of suitable habitat on, or immediately adjacent to the Plan Area and documented observations of these species near the Plan Area.

Burrowing owls were determined to have a potential to occur in the Plan Area due to the presence of suitable burrowing and foraging habitat and recorded observations within five miles of the Plan Area. Although burrowing owls were not observed during the site survey conducted by ECORP, the species is mobile and could take up residence at any time (ECORP 2019). Burrowing owls are a species of special concern and are also protected by the MBTA and California Fish and Game Code. Direct impacts to burrowing owls could occur by mortality and habitat loss during ground disturbance and indirect impacts could occur from construction noise, construction vibrations, increase human activity, and increased light pollution. Therefore, potentially significant impacts could occur.

The San Joaquin kit fox and American badger were determined to have a high and moderate potentials to occur in the Plan Area, respectively, due to the presence of suitable habitat and documented observations within five miles of the Plan Area. The San Joaquin kit fox is a federally endangered and state-listed threatened species and the American badger is a species of special concern. Although no San Joaquin kit fox or San Joaquin kit fox dens were observed during the site survey conducted by ECORP, the species is mobile and could take up residence at any time (ECORP 2019). Direct impacts to the San Joaquin kit fox and American badger could occur by mortality and habitat loss during ground disturbance and indirect impacts could occur from construction noise, construction vibrations, increased human activity, and increased light pollution (ECORP 2019). Therefore, potentially significant impacts could occur.

The loggerhead shrike was determined to have a moderate potential to occur in the Plan Area; suitable nesting habitat is present within the orchards onsite and suitable foraging habitat is present throughout the Plan Area. Furthermore, the San Joaquin antelope squirrel was determined to have a moderate potential to occur in the Plan Area along the southern half of the western border of the Plan Area, which is adjacent to suitable grassland habitat. The majority of the Plan Area, which consists of active and fallow agriculture, does not represent suitable habitat for the species. however, the grassland habitat adjacent to the southern half of the western border of the Plan Area is suitable for the species. Additionally, numerous small burrows of the appropriate size for the San Joaquin antelope squirrel were observed within the grassland habitat and along the road that runs along the southwest border of the Plan Area.

If the San Joaquin antelope squirrels are present in the adjacent suitable habitat then it is possible that they could venture onto the Plan Area while foraging or moving about their home range (ECOR 2019). The portion of the Plan Area that is immediately adjacent to the grassland habitat along the western border of the Plan Area would be designated as Specialty Agriculture (A-JR) and Specialty Agriculture with Air Strip Overlap (A-JR) under the Specific Plan (see Figure 3-4, *Specific Plan Land Use Plan*),. If this area remains as active or fallow agriculture, implementation of the Specific Plan would not affect the San Joaquin antelope squirrel; however, if this area is developed or used for non-active or non-fallow agricultural land under the Specific Plan, then impacts to the San Joaquin antelope squirrel could occur (ECORP 2019). Direct impacts to San Joaquin antelope squirrel could occur by mortality and habitat loss during ground disturbance and

indirect impacts could occur from construction noise, construction vibrations, and increase human activity. Therefore, potentially significant impacts could occur.

Additionally, the San Joaquin coachwhip was determined to have a low potential to occur in the Plan Area, and although no suitable habitat is present in the Plan Area, the grassland habitat adjacent to the Plan Area along the southern half of the western border is considered suitable. If this species is present within this adjacent suitable habitat, it is possible it could venture onto the Plan Area while foraging or moving about its home range (ECORP 2019). However, due to the disturbed nature of the Plan Area and the lack of quality habitat, if this species occurs within the Plan Area, it is likely to occur only in very low density and loss of those animals would not be enough to result in a significant impact. Furthermore, the tricolored blackbird was determined to have a low potential to exist in the Plan Area as there is no suitable nesting habitat identified within the Plan Area, but marginally suitable foraging habitat is present (ECORP 2019). Therefore, it is not anticipated that impacts would occur on to these species.

Raptors and Migratory Birds

Migratory non-game native bird species are protected under the MBTA. Additionally, Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests. The Plan Area contains suitable vegetation for migratory birds and raptors within the orchards and vegetation suitable for nesting birds is also present immediately adjacent to the Plan Area (ECORP 2019). Construction activities of development projects that would be accommodated by the Specific Plan could indirectly affect nesting birds; raptors typically breed between February and August, and songbirds and other passerines generally nest between March and August. Potential impacts could occur if ground disturbing activities or vegetation removal occur during the bird nesting season. Therefore, potentially significant impacts could occur.

Special-Status Plant Species

The Plan Area consists of active and fallow agriculture, which is disturbed, and large portions of the Plan Area are completely devoid of vegetation (see Figure 3-3, *Aerial Photograph*). Based on the literature review conducted as part of the biological technical report (Appendix D), seven special-status plant species could occur in the Plan Area (see Table 5.3-1, *Special-Status Plant Species Potentially Present on and/or near the Plan Area*). However, due to the Plan Area's long agricultural history, frequent disturbance and disking, and current lack of suitable habitat for the special-status plant species, all species are presumed to be absent from the Plan Area (ECORP 2019). The removal and replacement of the active and fallow agricultural land in the Plan Area would not contribute to the overall decline of any plant species identified in the biological technical report and no impacts to special-status plant species are anticipated to result from the development that would be accommodated by Specific Plan (ECORP 2019).

Native Vegetation Communities/Habitat

No native vegetation communities are present within the Plan Area; the Plan Area consists of active and fallow agricultural land, and the remainder of the Plan Area not in agricultural production consist of recently disked fallow agricultural land. In general, the Plan Area supports mostly nonnative grass and forb species.

The active and fallow agricultural land within the Plan Area do not provide substantial habitat for native wildlife (ECORP 2019). Therefore, it is not anticipated that impacts would occur.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, potential impacts to certain special-status wildlife species and migratory birds could occur as a result of implementation of the Specific Plan. As also concluded above, impacts to special-status plant species and native vegetation communities/habitat are not anticipated to occur.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The roadway is a north-south, two-lane road that is surrounded by agricultural uses on both sides and runs from the Plan Area to Kettleman City. The water main would stretch along this roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Given the existing disturbed character of the 25th Avenue right-of-way (consists of pavement and some areas of compacted soil), there is no potential for this project improvement to result in any impact to biological resources. Additionally, no land or uses on private property abutting the entire stretch of 25th Avenue would be affected by the proposed water main improvements as the improvements would occur within the confines of the roadway right-of-way. Therefore, impacts to special-status species and native vegetation communities/habitat are not anticipated to occur.

Impact 5.3-2: Implementation of the Specific Plan would not interfere with an established wildlife corridor; however, removal of vegetation onsite during site clearance could impact nesting migratory birds. [Threshold B-4]

Impact Analysis. Following is a discussion of the potential impacts to wildlife corridors and migratory birds as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

As stated in Section 5.3.1.6, *Wildlife Movement Corridors*, the Plan Area is not considered to be a linkage or corridor between conserved natural habitat areas (ECORP 2019). However, as discussed above under Impact

5.3-2, loggerhead shrike, tricolored blackbird, and other migratory bird species protected under the MBTA and California Fish and Game are expected to occur in the Plan Area due to the presence of suitable nesting habitat within the orchards in the Plan Area. Direct impacts to loggerhead shrike, tricolored blackbird, and other migratory bird species and their nests could occur through mortality and habitat loss during ground disturbance and indirect impacts could occur from construction noise, construction vibrations, and increased light pollution. Therefore, potentially significant impacts could occur.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, potential impacts to migratory birds could occur as a result of implementation of the Specific Plan.

Specific Plan – Offsite Water Infrastructure Improvements

Given the existing disturbed character of the 25th Avenue right-of-way (consists of pavement and some areas of compacted soil), there is no potential for this project improvement to result in any impact to wildlife corridors or migratory birds. Additionally, no land or uses on private property abutting the entire stretch of 25th Avenue would be affected by the proposed water main improvements as the improvements would occur within the confines of the roadway right-of-way. Therefore, no impact to wildlife corridors or migratory birds are anticipated to occur.

5.3.4 Cumulative Impacts

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. However, implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in a cumulative impact to biological resources in the County.

However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, other development projects would require the preparation of site-specific biological resource assessments, which would include some degree of site surveying. Additionally, as with the Specific Plan, other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address biological resources impacts. They would also be required to demonstrate their consistency with applicable biological resources goals, objectives, and policies of the Kings County General Plan.

Furthermore, as demonstrated above, with mitigation, impacts on biological resources as a result of implementation of the Specific Plan would be reduced to a level of less than significant. The mitigation

measures include Mitigation Measures BIO-1 through BIO-5, which would ensure the protection of special-status species and their habitats and migratory birds.

In consideration of the preceding, the Specific Plan's contribution to cumulative archeological resource impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to biological resources apply to the Specific Plan and are described in detail in Section 5.3.1.1, *Regulatory Background*, above.

- Endangered Species Act
- Migratory Bird Treaty Act
- Clean Water Act, Sections 401, 402, and 404
- California Fish and Game Code
- California Endangered Species Act
- Native Plant Protection Act

5.3.5 Level of Significance Before Mitigation

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

- **Impact 5.3-1** Implementation of the Specific Plan could impact special-status wildlife species and nesting migratory birds.

- **Impact 5.3-2** Removal of trees and other vegetation onsite in the Plan Area could impact nesting migratory birds protected by federal and state laws.

5.3.6 Mitigation Measures

Impact 5.3-1

Specific Plan – Plan Area Buildout

BIO-1 Prior to the commencement of any development activity within the development area covered by the Jackson Ranch Specific Plan (Plan Area), pre-construction surveys for burrowing owls shall be conducted by a qualified biologist to ensure potential impacts to burrowing owls resulting from project-related construction activities (including site preparation, clearing, and grubbing) are avoided and/or minimized to less-than-significant levels. The following measures shall be taken:

- A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct preconstruction surveys of the permanent and temporary

impact areas, plus a 150-meter (approximately 492-foot) buffer, to locate active breeding or wintering burrowing owl burrows no less than 14 days prior to construction. The survey methodology will be consistent with the methods outlined in the California Department of Fish and Wildlife (CDFW) staff report on Burrowing Owl Mitigation and will consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing. Copies of the survey results shall be submitted to the CDFW and Kings County Community Development Agency.

- A qualified biologist shall conduct an additional preconstruction survey of all impact areas plus an approximately 492-foot buffer no more than 24-hours prior to start or restart (as the case may be) of ground-disturbing construction activities in order to identify any additional burrowing owls or burrows necessitating avoidance, minimization, or mitigation measures.
- If burrowing owls are detected, no ground-disturbing activities, such as road construction or ancillary facilities construction, shall be permitted within the distances listed in the CDFW Staff Report on Burrowing Owl Mitigation, unless otherwise authorized by CDFW. Burrowing owls shall not be moved or excluded from burrows during the breeding season.
- If any burrowing owl burrows are observed during the preconstruction survey, avoidance measures shall be consistent with those included in the CDFW Staff Report on Burrowing Owl Mitigation. If avoidance of active burrows is infeasible, the owls may, in consultation with CDFW, be passively displaced from their burrows according to recommendations made in the CDFW Staff Report on Burrowing Owl Mitigation.

BIO-2 Prior to the commencement of any development activity within the development area covered by the Jackson Ranch Specific Plan (Plan Area), preconstruction surveys for San Joaquin kit fox and American badger shall be conducted by a qualified biologist (i.e., a wildlife biologist with previous San Joaquin kit fox and American badger survey experience) to ensure potential impacts to San Joaquin kit fox and American badger resulting from project-related construction activities (including site preparation, clearing, and grubbing) are avoided and/or minimized to less-than-significant levels. The survey shall follow the USFWS's Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance. If any evidence of occupation of that portion of the Plan Area by the San Joaquin kit fox or American badger is observed, a buffer shall be established by a qualified biologist that results in sufficient avoidance to comply with applicable regulations. If sufficient avoidance cannot be established, the US Fish and Wildlife Services (USFWS) and California Department of Fish and Wildlife (CDFW) shall be contacted for further guidance and consultation on additional measures. The project proponent shall obtain any required permits from the appropriate wildlife agency. The following buffer distances shall be established prior the commencement of any development activity within the Plan Area:

- San Joaquin kit fox or American badger potential den: 50 feet.
- San Joaquin kit fox or American badger known den: 100 feet.
- San Joaquin kit fox or American badger pupping den: contact USFWS and CDFW.

BIO-3 Prior to and during construction activities of any development within the development area covered by the Jackson Ranch Specific Plan (Plan Area), the project applicant shall ensure that the proposed development complies with the following measures to avoid impacts to San Joaquin kit fox:

- All pipes, culverts, or similar structures with a diameter of four inches or more that are stored within the Plan Area for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the US Fish and Wildlife Services (USFWS) has been consulted. If necessary, under the direct supervision of the qualified biologist, the pipe may be moved once to remove it from the path of construction activity until the fox has escaped.
- If any San Joaquin kit fox dens are found during preconstruction surveys, the status of the dens shall be evaluated no more than 14 days prior to the proposed ground disturbance. Provided that no evidence of kit fox operation is observed, potential dens shall be marked, and a 50-foot avoidance buffer delineated using stakes and flagging or other similar material to prevent inadvertent damage to the potential den. If a potential den cannot be avoided, it may be hand-excavated following the USFWS's Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance by the qualified biologist. If kit fox activity is observed at the den, the den status shall change to "known" per USFWS Guidelines, and the buffer distance shall be increased to 100 feet. Absolutely no excavation of San Joaquin kit fix known, or pupping dens shall occur without prior authorization from USFWS and the California Department of Fish and Wildlife (CDFW).
- During construction, to enable kit foxes that may occur onsite, the perimeter security fence shall leave a five-inch opening between the fence mesh and the ground or the fence shall be raised five inches above the ground. The bottom of the fence fabric shall be knuckled (wrapped back to form a smooth edge) to protect wildlife that passes under the fence.
- To prevent inadvertent entrapment of San Joaquin kit foxes, badgers, or other animals during construction, all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or similar materials at the close of each working day or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes and trenches are filled, they shall be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed

immediately to allow escape. If listed species are trapped, the USFWS and CDFW shall be contacted.

- Project-related vehicles shall observe a 15-mile-per-hour speed limit in all portion of the Plan Area, except County roads and federal and state highways. Construction after sundown shall be prohibited. Off-road traffic outside of designated project areas shall be prohibited.
- All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from construction sites in the Plan Area.
- No domestic pets shall be allowed in Plan Area, except for trained canine animals related to security and operation of the facility.
- All uses of herbicidal and rodenticide compounds shall observe label and other restrictions mandated by the US Environmental Protection Agency, California Department of Food and Agriculture, and federal and state legislation as well as additional project-related restrictions deemed necessary by CDFW and/or the USFWS.
- No plants or wildlife shall be collected, taken, or removed from the construction areas or areas of off-site improvements, except as necessary for project-related vegetation removal or wildlife relocation. Salvage of native vegetation to be removed from construction areas is encouraged but shall only be performed by a qualified biologist and with written approval from CDFW.

BIO-4 San Joaquin antelope squirrel may be present within the southern half of the development area covered by the Jackson Ranch Specific Plan (Plan Area), along the western border and within areas adjacent to the grassland habitat located along the aqueduct. Prior to development of the Plan Area land adjacent to the grassland habitat, focused surveys for San Joaquin antelope squirrel shall be conducted by a qualified biologist (i.e., a wildlife biologist with previous San Joaquin kit fox and American badger survey experience) according to the California Department of Fish and Wildlife (CDFW) Region 4 Approved Methodologies for Sensitive Species. Surveys for San Joaquin antelope squirrel shall be conducted using daytime line transects at 10- to 30-meter (30- to 100-foot) intervals so that the areas is covered in a systematic manner. While walking the transects, the qualified biologist shall scan the area (including using binoculars) looking for the species and listening for the species vocalizations. Transect surveys shall be conducted only when air temperatures are between 20° C to 30° C (68° F to 86° F). These parameters shall be checked before walking each transect. Visual and audible observations of San Joaquin antelope squirrel shall be recorded and mapped along with the location of suitable burrows. Representative burrows shall be photographed. Surveys for San Joaquin antelope squirrel shall coincide with their most active season, April 1 to September 30. Less active times of year are associated with low temperatures. Surveys conducted outside of these parameters, which confirm the presence of the species, will also be accepted. If San Joaquin antelope squirrels are determined to be

present on or immediately adjacent to the Plan Area, the project applicant shall consult with CDFW to determine appropriate avoidance measures, which could include but is not limited to installing small mammal exclusion fencing, biological monitoring, and/or burrow excavation.

BIO-5 If construction or other project activities are scheduled to occur during the bird breeding season (February through August for raptors and March through August for the majority or migratory birds species), a pre-construction nesting bird survey shall be conducted by a qualified biologist to ensure that active bird nests, including those for the loggerhead shrike, will not be disturbed or destroyed. The survey shall be completed no more than 14 days prior to initial ground disturbance. The nesting bird survey shall include the development area covered by the Jackson Ranch Specific Plan (Plan Area) and adjacent areas where project activities have the potential to affect active nests, either directly or indirectly due to construction activity or noise. If an active nest is identified, a qualified biologist shall establish an appropriate disturbance limit buffer around the nest using flagging or staking. Construction activities shall not occur within any disturbance limit buffer zones until the nest is deemed inactive by the qualified biologist.

Specific Plan – Phase One Buildout

Mitigation Measures BIO-1 through BIO-5 also apply here.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

Impact 5.3-2

Specific Plan – Plan Area Buildout

Mitigation Measure BIO-5 also applies here.

Specific Plan – Phase One Buildout

Mitigation Measure BIO-5 also applies here.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

5.3.7 Level of Significance After Mitigation

With the implementation of Mitigation Measures BIO-1 through BIO-5, potential impacts to biological resources would be reduced to a level of less than significant.

5.3.8 References

ECORP Consulting, Inc. 2019. Biological Technical Report: Jackson Ranch Specific Plan.

5.4 CULTURAL RESOURCES

Cultural resources comprise archaeological and historical resources. A cultural resource is defined as any object or specific location of past human activity, occupation, or use, identifiable through historical documentation, inventory, or oral evidence. Cultural resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. Cultural resources can be separated into three categories: archaeological, built environment, and traditional cultural resources.

Archaeology studies human artifacts, such as places, objects, and settlements that reflect group or individual religious, cultural, or everyday activities. Archaeological resources include both historic and prehistoric remains of human activity. Historic-period resources can consist of historic structures, structural ruins (such as foundation remnants), sites (such as artifact reuse deposits and artifact-filled features), objects, or places that are at least 50 years old and are significant for their engineering, architecture, cultural use or association. Prehistoric resources can include lithic artifact or ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and monuments, canals, historic roads and trails, bridges, and ditches and objects.

A traditional cultural resource or property can include Native American sacred sites (such as rock art sites and cemeteries) and traditional resources, such as gathering locations, which are important for maintaining the cultural traditions of any group. These resources are described and evaluated in Section 5.12, *Tribal Cultural Resources*.

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Jackson Ranch Specific Plan (Specific Plan) to impact cultural resources in unincorporated Kings County— specifically, in the area covered by the Specific Plan (Plan Area) and its surroundings. Impacts to paleontological resources are addressed in Section 5.5, *Geology and Soils*.

The analysis in this section is based in part on the following technical report:

- *Culture Resources Inventory*, ECORP Consulting, Inc., April 2019

This report is confidential and not available for public review. It is incorporated by reference in this section.

5.4.1 Environmental Setting

5.4.1.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, or guidelines related to archeological resources that are applicable to the Specific Plan are summarized below.

Federal

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 (United States Code, Title 16, Sections 470aa et seq.) regulates the protection of archaeological resources and sites on federal and Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

State

California Public Resources Code

Archaeological, paleontological, and historical sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). In addition, cultural and paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA.

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the Native American Heritage Commission (NAHC); require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

Local

Kings County General Plan

The Resource Conservation Element of the Kings County General Plan includes various goals, objectives, and policies to ensure the protection of cultural resources in the County, which include:

- **RC GOAL I1.** Preserve significant historical and archaeological sites and structures that represent the ethnic, cultural, and economic groups that have lived and worked in Kings County.
    - **RC Policy I1.1.3.** Encourage the protection of cultural and archaeological sites with potential for placement on the National Register of Historic Places and/or inclusion in the California Inventory of
    - **RC Policy I1.2.1.** Participate in and support efforts to identify significant cultural and archaeological resources and protect those resources in accordance to Public Resources Code 5097.9 and 5097.993.
    - **RC Policy I1.2.3.** Address archaeological and cultural resources in accordance with the California Environmental Quality Act (CEQA) for discretionary land use applications.

- **RC Policy I1.2.5.** The County will respectfully comply with Government Code §6254.(r) and 6254.10 by protecting confidential information concerning Native American cultural resources. For example, adopting internal procedures such as keeping confidential archaeological reports away from public view or discussion in public meetings.

5.4.1.2 EXISTING CONDITIONS

Geologic Setting

The Plan Area is in southern San Joaquin Valley, an alluvial plain within the Great Valley Geomorphic Province. The Great Valley Geomorphic Province is characterized by mostly flat grasslands extending from southern California into Northern California. The Great Valley is bounded by the Coast Ranges to the west, Sacramento Valley to the north, the Sierra Nevada Mountains to the west, and the Traverse Ranges to the south (CGS 2002).

The Plan Area is generally level, with an elevation of 298 feet above mean sea level (amsl) along the northwestern boundary and an approximate elevation of 240 feet amsl at the eastern corner adjacent to Interstate 5. The slope varies between one and three percent across the Plan Area (ECORP 2019).

Surface deposits in the Plan Area consist of younger Quaternary Alluvium, derived as alluvial fan deposits from the Middle Dome of the Kettleman Hills immediately to the west. Immediate to the west of the Plan Area there are exposures of the Plio-Pleistocene Tulare Formation, marine late Miocene Etchegoin Formation on South Dome, and this rock unit may also underlie the younger Quaternary deposits in the Plan Area (NHAMC 2019).

Cultural Setting

Regional Prehistory

The human occupation of California began during the Terminal Pleistocene. The archaeological record indicates that between approximately 10,000 and 8,000 years before present (BP), a predominantly hunting economy existed, characterized by archaeological sites containing numerous projectile points and butchered large animal bones. Animals that were hunted probably consisted mostly of large species still alive today. Bones of extinct species have been found but cannot definitely be associated with human artifacts. Although small animal bones and plant grinding tools are rarely found within archaeological sites of this period, small game and floral foods were probably exploited on a limited basis. A lack of deep cultural deposits from this period suggests that groups included only small numbers of individuals who did not often stay in one place for extended periods.

The earliest human use of the southern San Joaquin Valley is indicated by a few projectile points similar to Clovis spear points. Elsewhere in North America, Clovis points are dated to approximately 13,500 to 10,000 BP during the Terminal Pleistocene/Early Holocene. In addition, hundreds of early concave base points were found along a past shoreline of Tulare Lake in association with human bone that has been dated to 13,800 to 9,400 BP. This indicates that small bands of hunters were present around Tulare Lake at this early time period. Early Holocene human activity is also represented by individual flaked stone tools, including stemmed

points, concave base points, and crescents in the archaeological record around Tulare Lake. No evidence of camp sites or other residential sites has been found. A site near Buena Vista Lake yielded three crescents, a stemmed projectile point, and several small flaked stone tools. Animal bones indicated use of fish, waterfowl, freshwater mussels, and artiodactyls (probably deer and pronghorn antelope.

Around 8,000 years BP, there was a shift in focus from hunting toward a greater reliance on plant resources. Archaeological evidence of this trend consists of a much greater number of milling tools (e.g., metates and manos) for processing seeds and other vegetable matter. This period, which extended until around 5,000 years BP, is sometimes referred to as the Millingstone Horizon. Projectile points are found in archaeological sites from this period, but they are far fewer in number than from sites dating to before 8,000 years BP. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period.

During the Middle Holocene (approximately 6,500 to 3,500 years BP), warmer, drier conditions prevailed. Tulare Lake decreased in size and eventually dried completely. Toward the end of this period in the northern San Joaquin Valley, residential sites are found along the rivers in the valley with temporary camps elsewhere. Specialized fishing technology, including gorge hooks, composite bone hooks, and spears, is found in these sites, along with abundant fish bone. Few sites dating to this period have been found in the southern San Joaquin Valley, possibly due to the desiccation of Tulare Lake.

In sites dating to after about 5,000 years BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. Mortars and pestles were added to metates and manos for grinding seeds and other vegetable material. Flaked-stone tools became more refined and specialized, and bone tools were more common. During this period, new peoples from the Great Basin began entering southern California. These immigrants, who spoke a language of the Uto-Aztecan linguistic stock, seem to have displaced or absorbed the earlier population of Hokan-speaking peoples. Population densities increased, and settlement became concentrated in villages and communities along the coast and interior valley. Regional subcultures also started to develop, each with its own geographical territory and language or dialect. These were most likely the basis for the groups encountered by the first Europeans during the eighteenth century. Despite the regional differences, many material culture traits were shared among groups, indicating a great deal of interaction. The introduction of the bow and arrow into the region sometime around 2,000 years BP is indicated by the presence of small projectile points.

Cooler, wetter conditions returned from 2,500 to 1,000 years BP, and Tulare, Buena Vista, and Kern lakes filled with water. However, few sites dating to this time are known from the southern San Joaquin Valley, possibly because they were buried by later deposition. Two sites excavated at Buena Vista Lake in the 1930s date to the Late Holocene and have house floors and subsistence waste indicating exploitation of both aquatic and terrestrial environments. These sites have roasting pits, charmstones, bone strigils and bipoints, limpet shell ornaments, and Olivella half-shell and saucer beads. The cultures in place at the time of European contact are believed to have developed from approximately 1,000 year BP to the historic era. Sites at Buena Vista Lake from this period are villages with numerous house pits, triangular arrow points, an elaborate steatite industry, and pottery.

Ethnohistory

The predominant Native American group occupying the region encompassing the Plan Area at the time of European contact in the late eighteenth century was the Southern Valley Yokuts. The southern San Joaquin Valley was originally covered by sloughs and marshes surrounding three shallow lakes: Tulare Lake, Buena Vista Lake, and Kern Lake. The lakes were fed by rivers coming from the Sierra Nevada, such as the Kern River. Areas away from the lakes, rivers, and sloughs were dry since the valley receives less than 10 inches of rain per year. The Southern Valley Yokuts obtained fish, freshwater mussels, turtles, and waterfowl from the lakes and marshes. Fishing was carried out year-round. Elk and pronghorn antelope were hunted from blinds when they came to the lakes to drink. Grass and tule seeds were important plant foods. Since there were no oak trees on the valley floor, acorns were not an important food.

The Yokuts lived in villages occupied year-round near lakes, sloughs, and rivers. However, groups of people left the village and lived in temporary camps while collecting seeds in the spring. Single family houses consisted of wood frames covered with tule mats. There were also large multi-family communal residences that were long mat-covered rectangular structures with steep pitched roofs. These structures were divided into sections so that each family had their own fireplace and door. A shade porch, where cooking took place, ran along the front of the building. Seeds, roots, and dried fish were stored in mat covered granaries raised off the ground. Each village also had an earth-covered sweathouse for use by men. Tule was used to make baskets and cradles. Wood and stone were obtained through trade with groups outside the valley. Marine shells obtained from coastal people were made into beads by the Yokuts. Clamshell disks circulated as money and Olivella beads and abalone pendants were strung for necklaces. Canoes and rafts made of tule were used for water transport.

The Southern Valley Yokuts were organized in territorial tribelets with an average population of 350 people. Each tribelet spoke a different dialect and claimed the resources within its territory. Each tribelet had a chief who belonged to the Eagle lineage. Usually there was more than one village in a tribelet territory. The Plan Area is located at what would have been the western shore of Tulare Lake in the territory of the Tachi tribelet. The village of Walna once existed north of the Plan Area near the present-day community of Kettleman City. There were no villages in the Plan Area, but there could have been temporary camps used by seed collecting parties.

General History

The first European to visit California was Spanish maritime explorer Juan Rodriguez Cabrillo in 1542. Cabrillo was sent north by the Viceroy of New Spain (Mexico) to look for the Northwest Passage. Cabrillo visited San Diego Bay, Catalina Island, San Pedro Bay, and the northern Channel Islands. The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. Sebastián Vizcaíno explored the coast as far north as Monterey in 1602. He reported that Monterey was an excellent location for a port.

5. Environmental Analysis
CULTURAL RESOURCES

Colonization of California began with the Spanish Portolá land expedition. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, presidios (forts), and pueblos (towns) were established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego in 1769 and ending with the mission in Sonoma established in 1823. The purpose of the missions and presidios was to establish Spanish economic, military, political, and religious control over the Alta California territory. No missions were established in the Central Valley. The nearest missions were in the vicinity of San Francisco Bay and included Mission San Francisco de Asis (Dolores) established in 1776 on the San Francisco Peninsula, Mission Santa Clara de Asis at the south end of San Francisco Bay in 1777, Mission San Jose in 1797, Mission San Rafael, established as an *asistencia* in 1817 and a full mission in 1823, and Mission San Francisco Solano in Sonoma in 1823. Presidios were established at San Francisco and Monterey. The Spanish took little interest in the area and did not establish any missions or settlements in the Central Valley.

After Mexico became independent from Spain in 1821, what is now California became the Mexican province of Alta California with its capital at Monterey. In 1827, American trapper Jedediah Smith traveled along the Sacramento River and into the San Joaquin Valley to meet other trappers of his company who were camped there, but no permanent settlements were established by the fur trappers.

The Mexican government closed the missions in the 1830s and former mission lands, as well as previously unoccupied areas, were granted to retired soldiers and other Mexican citizens for use as cattle ranches. Much of the land along the coast and in the interior valleys became part of Mexican land grants or "ranchos". During the Mexican period, there were small towns at San Francisco (then known as Yerba Buena) and Monterey. The rancho owners lived in one of the towns or in an adobe house on the rancho. The Mexican Period includes the years 1821 to 1848.

John Sutter, a European immigrant, built a fort at the confluence of the Sacramento and American rivers in 1839 and petitioned the Mexican governor of Alta California for a land grant, which he received in 1841. Sutter built a flour mill and grew wheat near the fort. Gold was discovered in the flume of Sutter's lumber mill at Coloma on the South Fork of the American River in January 1848. The discovery of gold initiated the 1849 California Gold Rush, which brought thousands of miners and settlers to the Sierra foothills east and southeast of Sacramento.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. As a result of the treaty, Alta California became part of the United States as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries, which were surveyed by the U.S. Surveyor General's office. Land outside the land grants became federal public land which was surveyed into sections, quarter-sections, and quarter-quarter sections. The federal public land could be purchased at a low fixed price per acre or could be obtained through homesteading (after 1862).

Land in the Plan Area remained marshland throughout the nineteenth century. The federal government classified land in the Plan Area as swamp land and transferred it to the State of California in 1896 and 1900. The state sold the land to settlers who would agree to drain and reclaim the land. The Southern Pacific Railroad constructed its route through the southern San Joaquin Valley in 1872 as part of the route from San Francisco to Los Angeles. The towns of Lemoore and Hanford began as stations along the Southern Pacific Railroad. Kings County was formed from the western part of Tulare County in 1893 and Hanford became the county seat.

Cultural Resources – Plan Area

Records Search Results

A cultural resources records search of the California Historical Resources Information System (CHRIS) was conducted by ECORP Consulting, Inc. (ECORP) in March 2019 at the Southern San Joaquin Valley Information Center (SSJVIC). The purpose of the records search was to determine the extent of previous cultural resources investigations and the presence of previously-recorded archaeological sites or historic-period (i.e., more than 50 years in age) resources in and within a one-mile (1600-meter) radius of the Plan Area.

Other materials and resources reviewed included reports of previous cultural resources investigations, archaeological site records, historical maps, and listings of resources on the National Register of Historic Places, California Register of Historical Resources, California Points of Historical Interest, California Landmarks, and National Historic Landmarks. Topographic maps from 1930, 1934, 1943, 1956, 1972, 1982, 2012, and 2015 were also reviewed for any indications of property usage and built environment. Aerial photographs taken in 1994, 2005, 2009, 2010, 2012, and 2014 were also reviewed.

The results of the CHRIS records search were received by ECORP on March 19, 2019. The records search indicated that seven cultural resources investigations were conducted within a one-mile radius of the Plan Area between 1987 and 2017. Four of these investigations overlap a small section of the northeast corner of the Plan Area, comprising a negligible portion of the overall Plan Area. Details of all seven investigations are presented in Table 5.4-1.

Table 5.4-1 Previous Cultural Studies In or Within One Mile of the Plan Area

Report Number	Author(s)	Affiliation	Report Title	Year	Includes Portion of the Plan Area?
KI-000090; Caltrans – 06-KIN-5 PM 12.32; 16.57 EA 06-333560	Laylander, Don, Marine, Mandy, Chick, Phil, Wallace, Sarah	California Department of Transportation	Negative Archaeological Survey Report to Install Traffic Surveillance Stations at 21 Locations in Kern, Kings, and Tulare Counties	1999	Yes
KI-00098	Billat, Lorna	EarthTouch, LLC	Nextel Communication Wireless Telecommunications Service Facility – Kings County: Nextel Site No. CA-0567S / Kettleman Hills	2000	No
KI-00141; Submitter – Application No. 01-04-012	Unknown	Aspen Environmental Group	Los Banos-Gates 500 kV Transmission Project Draft Supplemental Environmental Impact Report (Cultural Resources Section)	2001	No
KI-00271	Peak & Associates	Peak & Associates	Report on the Cultural Resources Assessment of the Proposed San Joaquin Valley Pipeline	1987	No
KI-00293; Caltrans – EA 06- 0T020	Roper, Kristina C.	Far Western Anthropological Research Group (for Caltrans)	Historic Resources Compliance Report Interstate 5 Vehicle Detection Systems at 18 Locations in Kings and Fresno Counties, California	2017	Yes
KI-00293A	Roper, Kristina C.	Far Western Anthropological Research Group (for Caltrans)	Archaeological Survey Report Interstate 5 Vehicle Detection Systems at 18 Locations in Kings and Fresno Counties, California	2017	Yes
KI-00293B	Young, Craig D.	Far Western Anthropological Research Group (for Caltrans)	Geoarchaeological Investigations for Interstate 5 VDS in Kings and Fresno Counties, California	2017	Yes

Source: ECORP 2019.

The records search also indicated that one cultural resource, the California Aqueduct of the State Water Project, was previously recorded within the one-mile search radius. As shown in Figure 3-3, Aerial Photograph, a portion of the western Plan Area boundary abuts the California Aqueduct. No cultural resources were previously recorded within the Plan Area.

Sacred Lands File Search Results

A search of the Sacred Lands File by NAHC was requested by ECORP in March 2019. This search was requested to determine whether there are sensitive or sacred Native American resources in the vicinity of the Plan Area that could be affected by the Specific Plan. Results of the Sacred Lands File records search were received by ECORP on March 19, 2019. The results of the Sacred Lands File records search were negative, indicating no record for the presence of Native American Sacred Lands within the Plan Area. NAHC did however, note that the absence of specific site information in the Sacred Lands File does not indicate the absence of Native American cultural resources in the Plan Area.

Historic Aerial and Map Review Results

ECORP conducted a review of historic-period maps and aerial photographs. The review indicates that the Plan Area was in a rural, sparsely developed area in the early twentieth century. The Plan Area remains as undeveloped agricultural land (see Figure 3-3). A 1930 topographic map of the area shows no indication of land uses other than agricultural. Interstate 5 (I-5) and the California Aqueduct (which both abut the Plan Area boundary; see Figure 3-3) are first depicted on the 1982 topographic map.

The earliest aerial photograph available is from 1994. In this photo, the Plan Area is undeveloped, and the surrounding area is similar to its current condition. I-5 and the California Aqueduct are both visible in the image. No structures or other evidence of a built environment are present in the Plan Area in the 1994 aerial photograph or subsequent images.

Field Survey Results

Archaeological field work was conducted by ECORP archaeologists from March 11 to 15, 2019 and consisted of an intensive systematic pedestrian survey. The Plan Area was examined for the presence of cultural artifacts and features by walking the entire 415-acre Plan Area, using parallel east-west transects 10 to 15 meters apart. No newly-identified pre-contact or historic-era cultural resources were identified as a result of the field survey.

5.4.2 Thresholds of Significance

CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. Generally, a resource shall be considered "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated the with lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history. (PRC § 5024.1; 14 CCR § 4852)

The fact that a resource is not listed in the California Register of Historical Resources, not determined to be eligible for listing, or not included in a local register of historical resources does not preclude a lead agency from determining that it may be a historical resource.

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

C-1 Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

C-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

C-3 Disturb any human remains, including those interred outside of dedicated cemeteries.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold C-1
- Threshold C-3

These impacts will not be addressed in the following analysis.

5.4.3 Environmental Impacts

5.4.3.1 IMPACT ANALYSIS

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

Impact 5.4-1: Implementation of the Specific Plan could result in an impact on unknown subsurface archaeological resources. [Threshold C-2]

Impact Analysis. Following is a discussion of the potential impacts to archeological resources as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

As shown in Figure 3, *Aerial Photograph*, the Plan Area and surrounding area consists of active and fallow agricultural land or rangeland (grazing land). Historically, the Plan Area has been used primarily for farming. Therefore, the Plan Area has already been disturbed due to farming activities (i.e., grazing of animals, minimal soil disturbance for orchard planting) that have occurred over the years. Based on ECORP's review of historical maps and aerial photographs and records searches, there is no evidence of pre-contact or historic-era use of the Plan Area for anything other than agriculture.

Additionally, as a part of the Cultural Resources Inventory undertaken by ECORP for the Plan Area, ECORP staff conducted an intense systematic surface-level pedestrian survey (no digging was conducted) of the Plan Area in March 2019. The Plan Area was examined for the presence of cultural artifacts and features by walking the entire Plan Area, using parallel east-west transects 10 to 15 meters apart. No newly-identified pre-

contact or historic-era cultural resources were identified as a result of the field survey. ECORP concluded that the archaeological sensitivity of the Plan Area is believed to be low (ECORP 2019).

Furthermore, the results of the CHRIS records search conducted by ECORP indicated that seven cultural resources investigations were conducted within a one-mile radius of the Plan Area between 1987 and 2017. Details of all seven investigations are presented in Table 5.4-1, *Previous Cultural Studies In or Within One Mile of the Plan Area*. Four of these investigations overlap a small section of the northeast corner of the Plan Area. However, the overlap comprises a negligible portion of the overall Plan Area.

Finally, a search of the Sacred Lands File by the NAHC was negative, indicating no recorded presence of Native American cultural resources within or near the Plan Area. NAHC did however, note that the absence of specific site information in the Sacred Lands File does not indicate the absence of Native American cultural resources in the area. Refer to Section 5.12, *Tribal Cultural Resources*, for an analysis of the Specific Plan's impacts on tribal cultural resources.

However, given the relative undisturbed condition of the Plan Area (mostly shallow soil disturbance), the potential exists for development that would be accommodated by the Specific Plan to impact unidentified archeological resources that may underly the Plan Area. Although the archaeological sensitivity of the Plan Area can be considered low, there is the potential for ground-disturbing activities to expose previously unidentified archeological resources. For example, deep excavations in the Plan Area may encounter significant archeological resources. Since ground disturbance has the potential to uncover unidentified subsurface archeological resources, this is considered a potentially significant impact.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, potential impacts to unidentified subsurface archeological resources could occur as a result of project-related grading activities.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The roadway is a north-south, two-lane road that is surrounded by agricultural uses on both sides and runs from the Plan Area to Kettleman City. The water main would stretch along this roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Given the existing disturbed character of the 25th Avenue right-of-way (consists of pavement and some areas of compacted soil), there is a low likelihood for subsurface archeological resources to be discovered. Additionally, the entire roadway right-of-way has been subject to ground-disturbing activities similar to those that would occur under the proposed water main improvements. However, deeper excavations (up to a depth

of approximately five feet for installation of the water main) along the roadway right-of-way may encounter significant archeological resources. Therefore, potential impacts to unidentified subsurface archeological resources could occur as a result of water main-related grading activities.

5.4.4 Cumulative Impacts

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. However, implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could unearth unknown significant archeological resources. Other planned development projects in the County would involve ground disturbance and could damage archeological resources that could be buried in those project sites.

However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, other development projects would require the preparation of site-specific cultural resource assessments, which would include some degree of surface-level surveying. As a part of the assessments, a cultural resources records search of the CHRIS and a Sacred Land Files search would also be required. Additionally, as with the Specific Plan, other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address archeological resource impacts. They would also be required to demonstrate their consistency with applicable archeological resources goals, objectives, and policies of the Kings County General Plan.

Furthermore, as demonstrated above, with mitigation, impacts on archeological resources as a result of implementation of the Specific Plan would be reduced to a level of less than significant.

In consideration of the preceding, the Specific Plan's contribution to cumulative archeological resource impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.4.5 Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to cultural resources apply to the Specific Plan and are described in detail in Section 5.4.1.1, *Regulatory Background*, above.

- United States Code, Title 16, Sections 470aa et seq.: Archaeological Resources Protection Act
- California Public Resources Code Sections 5097.9–5097.991

5.4.6 Level of Significance Before Mitigation

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

- **Impact 5.4-1** Implementation of the Specific Plan could result in the unearthing and impact of an unidentified archeological resource.

5.4.7 Mitigation Measures

Specific Plan – Plan Area Buildout

CUL-1 Prior to any ground disturbance for any development phase of the Jackson Ranch Specific Plan, the project applicant/developer shall offer interested Native American Tribes (that is, Tribes with traditional territories in the project region) the opportunity to provide a Native American Monitor during construction-related ground disturbing activities and have retained a qualified archaeologist in order to provide pre-construction cultural resources awareness training to all construction personnel. Tribal participation would be dependent on the availability and interest of a Tribe. Training shall consist of a description of potential pre-contact and historic-era archaeological discoveries associated with the region and education on appropriate protocol following the unanticipated discovery of any archaeological deposits during construction. Furthermore, a qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained in an on-call capacity to evaluate any unanticipated finds by construction crew or other project personnel. If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. The qualified archaeologist shall be called on to evaluate the significance of the find and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the Kings County Community Development Agency (County), and applicable landowner. The County shall consult on a finding of eligibility and implement appropriate treatment measures if the find is determined to be eligible for inclusion in the California Register of Historic Resources (CRHR). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not eligible for or CRHR; or 2) that the treatment measures have been completed to their satisfaction.
- If the professional archeologist believes that a cultural resource encountered onsite is of Native American origin, the archaeologist shall notify representatives of Native American Tribes with traditional territories in the project region (e.g., Santa Rosa Tachi Yokut Tribe). If requested by the Native American tribe(s), the developer or archaeologist shall, in good faith, consult on the discovery and its disposition (e.g.,

avoidance, preservation, return of artifacts to tribe). If the resources are determined to be Native American in origin, a tribal monitor from the consulting tribe shall be present during the remaining site-grading activities.

- Upon coordination with the County, any archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded long-term preservation. Documentation for the archeological work shall be provided in accordance with applicable cultural resource laws and guidelines.
- If the find includes human remains, or remains that are potentially human, in coordination with the project applicant/construction contractor, the archeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Kings County Coroner (as per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 shall be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the Native American Heritage Commission (NAHC), who then will designate a Native American Most Likely Descendant (MLD) for the Specific Plan (§5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, NAHC may mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains onsite where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with NAHC or the appropriate information center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies (County and NAHC), through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Specific Plan – Phase One Buildout

Mitigation Measure CUL-1 also applies here.

Specific Plan – Offsite Water Infrastructure Improvements

Mitigation Measure CUL-1 also applies here.

5.4.8 Level of Significance After Mitigation

With the implementation of Mitigation Measure CUL-1, potential impacts to archaeological resources would be reduced to a level of less than significant.

5.4.9 References

California Geological Survey (CGS). 2002. California Geomorphic Provinces. https://www.conservation.ca.gov/cgs/Documents/Note_36.pdf.

ECORP Consulting, Inc. 2019, April. Cultural Resources Inventory.

Kings County Community Development Agency. 2010, January 26 (adopted). Resource Conservation Element. In 2035 Kings County General Plan. https://www.countyofkings.com/home/showdocument?id=3112.

Natural History Museum of Los Angeles County (NHMLAC). 2019, March 21. Results of Paleontological Resources Records Search.

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CULTURAL RESOURCES

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5.5 GEOLOGY AND SOILS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Jackson Ranch Specific Plan (Specific Plan) to impact paleontological resources in unincorporated Kings County——specifically, in the area covered by the Specific Plan (Plan Area) and its surroundings. The analysis in this section is based in part on the following technical reports:

- *Results of Paleontological Resources*, Natural History Museum of Los Angeles County, March 21, 2019

A complete copy of this report is included as Appendix E of this DEIR.

- *Cultural Resources Inventory*, ECORP Consulting, Inc., April 2019

This report is confidential and not available for public review. It is incorporated by reference in this section.

5.5.1 Environmental Setting

5.5.1.1 REGULATORY BACKGROUND

State laws, regulations, plans, or guidelines related to paleontological resources that are applicable to the Specific Plan are summarized below.

California Public Resources Code

The State of California Public Resources Code, Chapter 1.7, Sections 5097.5 and 30244, includes additional state level requirements for the assessment and management of paleontological resources. These statutes require reasonable mitigation of adverse impacts to paleontological resources resulting from development on state lands, define the removal of paleontological "sites" or "features" from state lands as a misdemeanor, and prohibit the removal of any paleontological "site" or "feature" from State land without permission of the jurisdictional agency. These protections apply only to State of California land.

5.5.1.2 EXISTING CONDITIONS

Regional Setting

The Plan Area is in southern San Joaquin Valley, an alluvial plain within the Great Valley Geomorphic Province. The Great Valley Geomorphic Province is characterized by mostly flat grasslands extending from southern California into Northern California. The Great Valley is bounded by the Coast Ranges to the west, Sacramento Valley to the north, the Sierra Nevada Mountains to the west, and the Traverse Ranges to the south (CGS 2002).

Local Setting

Topography

The Plan Area is generally level, with an elevation of 298 feet above mean sea level (amsl) along the northwestern boundary and an approximate elevation of 240 feet amsl at the eastern corner adjacent to Interstate 5. The slope varies between one and three percent across the Plan Area (ECORP 2019).

Geologic Units

Surface deposits in the Plan Area consist of younger Quaternary Alluvium, derived as alluvial fan deposits from the Middle Dome of the Kettleman Hills immediately to the west. Immediate to the west of the Plan Area there are exposures of the Plio-Pleistocene Tulare Formation, marine late Miocene Etchegoin Formation on South Dome, and this rock unit may also underlie the younger Quaternary deposits in the Plan Area (NHAMC 2019).

Paleontological Resources

Paleontological resources are commonly known as fossils, that is, the recognizable physical remains or evidence of past life forms found on earth in past geological periods—including bones, shells, leaves, tracks, burrows, and impressions. The Natural History Museum of Los Angeles County (NHMLAC) conducted a thorough search of their paleontology collection records for the locality and specimen data for the Plan Area. Their findings were provided in a letter to ECORP Consulting, Inc in March 2019 (Appendix E).

Based on their findings, NHMLAC found no known fossil vertebrate localities from the Quaternary Alluvium deposits in the Plan Area. The closest vertebrate fossil localities identified by NHMLAC from similar Quaternary Alluvium deposits are LACM 7844 and 7845, situated southwest of the Plan Area between Antelope Valley and Polonio Pass. These localities produced fossil specimens of common snakes (Colubridae), iguana lizards (Iguanidae), birds (Aves), jackrabbit (*Lepus*), cottontail (*Sylvilagus*), squirrels (Sciuridae), pocket gopher (*Thomomys*), pocket mouse (*Perognathus*), kangaroo rat (*Dipodomys*), and deer (*Odocoileus*). NHMLAC's next closest vertebrate fossil locality from these deposits is LACM 1156, east-southeast of the Plan Area just north of Delano. This locality produced a fossil specimen of horse (*Equus*) from a depth of 45 feet below the surface in a well core. NHMLAC's closest vertebrate fossil locality from the Tulare Formation is LACM 5458, situated due south of the Plan Area near Arroyo Recodo of the Middle Dome of the Kettleman Hills. A fossil specimen of woodrat (Neotoma) was collected at locality LACM 5458.

5.5.2 Thresholds of Significance

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

G-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42.)

ii) Strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction.

iv) Landslides.

G-2 Result in substantial soil erosion or the loss of topsoil.

G-3 Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

G-4 Be located on expansive soil, as defined in Table 18-1B of the Uniform building Code (1994), creating substantial direct or indirect risks to life or property.

G-5 Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water.

G-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold G-1
- Threshold G-2
- Threshold G-3
- Threshold G-4
- Threshold G-5

These impacts will not be addressed in the following analysis.

5.5.3 Environmental Impacts

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

Impact 5.5-1: Implementation of the Specific Plan could result in a direct or indirect impact on unknown subsurface paleontological resources. [Threshold G-5]

Impact Analysis. Following is a discussion of the potential impacts to paleontological resources as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would

result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

As shown in Figure 3, *Aerial Photograph*, the Plan Area and surrounding area consists of active and fallow agricultural land or rangeland (grazing land). Historically, the Plan Area has been used primarily for farming. Therefore, the Plan Area has already been disturbed due to farming activities (i.e., grazing of animals, minimal soil disturbance for orchard planting) that have occurred over the years.

Additionally, as a part of the Cultural Resources Inventory undertaken by ECORP Consulting, Inc. for the Plan Area, ECORP staff conducted an intense systematic surface-level pedestrian survey (no digging was conducted) of the Plan Area in March 2019. The Plan Area was examined for the presence of cultural artifacts and features by walking the entire Plan Area, using parallel east-west transects 10 to 15 meters apart. No paleontological resources were recorded during the field survey (ECORP 2019).

Furthermore, as stated above, in March 2019, NHMLAC conducted a thorough search of their paleontology collection records within and around the Plan Area. The purpose of the assessment was to determine the presence or absence of and potential impact to paleontological resources as a result of implementation of the Specific Plan. Based on their findings, NHMLAC found no fossil vertebrate localities from the Quaternary Alluvium deposits in the Plan Area. NHMLAC concluded that shallow excavations in the younger Quaternary alluvial fan deposits exposed throughout the Plan Area are unlikely to produce significant vertebrate fossils.

Finally, there are no unique geological features on or adjacent to the Plan Area. The Plan Area exhibits generally flat topography with an overall gentle inclination.

However, fossil localities were identified in the region, as described in detail in the *Paleontological Resources* discussion of Section 5.5.1.2, *Existing Conditions*. Additionally, given the relative undisturbed condition of the Plan Area (mostly shallow soil disturbance), the potential exists for development that would be accommodated by the Specific Plan to impact unidentified paleontological resources that may underly the Plan Area. For example, deep excavations in the Plan Area that extend down into older Quaternary deposits or deposits of the Tulare Formation may encounter significant paleontological resources. In their letter, NHMLAC noted that substantial excavations in the Plan Area should be monitored closely to ensure that any potential paleontological finds are handled quickly and professionally. Therefore, potential impacts to unidentified subsurface paleontological resources could occur as a result of project-related grading activities.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, potential impacts to unidentified subsurface paleontological resources could occur as a result of project-related grading activities.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The roadway is a north-south, two-lane road that is surrounded by agricultural uses on both sides and runs from the Plan Area to Kettleman City. The water main would stretch along this roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Given the existing disturbed character of the 25th Avenue right-of-way (consists of pavement and some areas of compacted soil), there is a low likelihood for subsurface fossil remains to be discovered. Additionally, the entire roadway right-of-way has been subject to ground-disturbing activities similar to those that would occur under the proposed water main improvements. However, as noted above, fossil localities were identified in the region, as described in detail in the Paleontological Resources discussion of Section 5.5.1.2, *Existing Conditions*. Additionally, deeper excavations (up to a depth of approximately five feet for installation of the water main) along the roadway right-of-way that extend down into older Quaternary deposits or deposits of the Tulare Formation may encounter significant paleontological resources. Therefore, potential impacts to unidentified subsurface paleontological resources could occur as a result of water main-related grading activities.

5.5.4 Cumulative Impacts

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. However, implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could unearth unknown significant paleontological resources. Other planned development projects in the County would involve ground disturbance and could damage paleontological resources that could be buried in those project sites.

However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, other development projects would require the preparation of site-specific paleontological resource assessments, which would include some degree of surface-level surveying. As a part of the assessments, NHMLAC would also be required to be contacted to conduct a thorough search of their paleontology collection records for the locality and specimen data for the specific development sites.

As also demonstrated above, with mitigation, implementation of the Specific Plan would not result in a site-specific or cumulative impact on paleontological resources.

In consideration of the preceding, the Specific Plan's contribution to cumulative paleontological resource impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.5.5 Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to paleontological resources apply to the Specific Plan and are described in detail in Section 5.5.1.1, *Regulatory Background*, above.

- California Public Resources Code, Chapter 1.7, Sections 5097.5 and 30244

5.5.6 Level of Significance Before Mitigation

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.5-1 Implementation of the Specific Plan could result in the unearthing and impact of an unidentified paleontological resource.

5.5.7 Mitigation Measures

Specific Plan – Plan Area Buildout

GEO-1 Prior to any ground disturbance for any development phase of the Jackson Ranch Specific Plan, the project applicant/developer shall provide a letter to the Kings County Community Development Agency from a qualified paleontologist. The letter shall state that the project applicant/developer has retained such an individual, which shall be selected in consultation with the County, and that the consultant will be on call during all grading and other significant ground-disturbing activities. The paleontologist shall also provide pre-construction awareness training to all construction personnel. Training shall consist of a description of potential paleontological resource discoveries associated within the region and education on appropriate protocol following the unanticipated discovery of any paleontological resource which occurs during construction.

In the event that potential paleontological resources are discovered during ground-disturbing activities, all such activity shall cease in the immediate area of the find, and the retained professional paleontologist shall be contacted immediately to examine the find. The paleontologist shall have the authority to halt any activities adversely impacting potentially significant paleontological resources until they can be formally evaluated. Suspension of ground disturbances in the vicinity of the discovery shall not be lifted until the paleontologist has evaluated the discovery. Work may continue in other areas of the project site and for other project elements while the encountered find is evaluated.

If upon examination the resource is determined to be a significant paleontological resource, the qualified paleontologist shall make recommendations on the treatment and disposition of the resource. The paleontologist shall prepare a final report describing all identified and curated resources (if any are found) and submit the report to the Kings County Community Development Agency.

Specific Plan – Phase One Buildout

Mitigation Measure GEO-1 also applies here.

Specific Plan – Offsite Water Infrastructure Improvements

Mitigation Measure GEO-1 also applies here.

5.5.8 Level of Significance After Mitigation

With the implementation of Mitigation Measure GEO-1, potential impacts to paleontological resources would be reduced to a level of less than significant.

5.5.9 References

California Geological Survey (CGS). 2002. California Geomorphic Provinces. https://www.conservation.ca.gov/cgs/Documents/Note_36.pdf.

ECORP Consulting, Inc. (ECORP). 2019, April. Cultural Resources Inventory.

Kings County Community Development Agency. 2010, January 26 (adopted). Resource Conservation Element. In 2035 Kings County General Plan. https://www.countyofkings.com/home/showdocument?id=3112.

Natural History Museum of Los Angeles County (NHMLAC). 2019, March 21. Results of Paleontological Resources Records Search.

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5.6 GREENHOUSE GAS EMISSIONS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Jackson Ranch Specific Plan (Specific Plan) to cumulatively contribute to greenhouse gas (GHG) emissions impacts. Because no single project is large enough to result in a measurable increase in global concentrations of GHG, climate change impacts of a project are considered on a cumulative basis.

This evaluation is based on the methodology recommended by the San Joaquin Valley Air Pollution Control District (SJVAPCD). Modeling of GHG emissions was conducted using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2, the California Air Resources Board's (CARB) EMFAC2017, Version 1.0.2, and CARB's OFFROAD2017 (Orion Web Database), Version 1.0.1. Model outputs are in Appendix C of this DEIR.

Terminology

The following are definitions for terms used throughout this section.

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a greenhouse gas absorbs relative to a molecule of carbon dioxide (CO_2) over a given period of time (20, 100, and 500 years). CO_2 has a GWP of 1.
- **Carbon dioxide-equivalent (CO_2e).** The standard unit to measure the amount of greenhouse gases in terms of the amount of CO_2 that would cause the same amount of warming. CO_2e is based on the GWP ratios between the various GHGs relative to CO_2.
- **$MTCO_2e$.** Metric ton of CO_2e.
- **$MMTCO_2e$.** Million metric tons of CO_2e.

5.6.1 Environmental Setting

5.6.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The "greenhouse effect" is the natural process that retains heat in the troposphere, which is the bottom layer of the atmosphere. Without the greenhouse effect, thermal energy would escape into space resulting in a much colder and inhospitable planet. GHGs are the components of the atmosphere responsible for the greenhouse effect. The amount of heat that is retained is proportional to the concentration of GHGs in the atmosphere. As more GHGs are released into the atmosphere, GHG concentrations increase and the atmosphere retains more heat, increasing the effects of climate change.

The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[1,2] The major GHGs applicable to the Specific Plan are briefly described.

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in landfills and water treatment facilities.

- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 5.6-1. The GWP is used to convert GHGs to CO_2-equivalence (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fourth Assessment Report (AR4), GWP values for CH_4, 10 MT of CH_4 would be equivalent to 250 MT of CO_2.

[1] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant because it is considered part of the feedback loop rather than a primary cause of change.

[2] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017a). However, state and national GHG inventories do not include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

Table 5.6-1 GHG Emissions and Their Relative Global Warming Potential Compared to CO_2

GHGs	Second Assessment Report Atmospheric Lifetime (Years)	Fourth Assessment Report Atmospheric Lifetime (Years)	Second Assessment Report Global Warming Potential Relative to CO_2[1]	Fourth Assessment Report Global Warming Potential Relative to CO_2[1]
Carbon Dioxide (CO_2)	50 to 200	50 to 200	1	1
Methane[2] (CH_4)	12 (±3)	12	21	25
Nitrous Oxide (N_2O)	120	114	310	298

Source: IPCC 1995, 2007.

Notes: The IPCC published updated GWP values in its Fifth Assessment Report (2013) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2. However, GWP values identified in AR4 are used to maintain consistency in statewide GHG emissions modeling. In addition, the 2014 Scoping Plan Update was based on the GWP values in AR4.

[1] Based on 100-year time horizon of the GWP of the air pollutant compared to CO_2.

[2] The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

California's GHG Sources and Relative Contribution

In 2019, the statewide GHG emissions inventory was updated for 2000 to 2017 emissions using the GWPs in IPCC's AR4.[3] Based on these GWPs, California produced 424.10 $MMTCO_2e$ GHG emissions in 2017. CARB categorizes GHG generation into the following seven sectors (CARB 2019b).

- **Transportation.** Consists of direct tailpipe emissions from on-road vehicle and direct emissions from off-road transportation mobile sources, intrastate aviation, rail, and watercraft. Emissions are generated from the combustion of fuels in on- and off-road vehicles in addition to aviation, rail, and ships.

- **Electric.** Includes emissions from instate power generation (including the portion of cogeneration emissions attributed to electricity generation) and emissions from imported electricity.

- **Industrial.** Includes emissions primarily driven by fuel combustion from sources that include refineries, oil and gas extraction, cement plants, and the portion of cogeneration emissions attribute to thermal energy output.

- **Commercial and Residential.** Accounts for emissions generated from combustion of natural gas and other fuels for household and commercial business use, such as space heating, cooking, and hot water or steam generation. Emissions associated with electricity usage are accounted for in the Electric Sector.

- **Recycling and Waste.** Consists of emissions generated at landfills and from commercial-scale composting.

- **Agriculture.** Primarily includes methane (CH_4) and nitrous oxide (N_2O) emissions generated from enteric fermentation and manure management from livestock. Also accounts for emissions associated with crop production (fertilizer use, soil preparation and disturbance, and crop residue burning) and fuel

[3] Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

combustion associated with stationary agricultural activities (e.g., water pumping, cooling or heating buildings).

- **High Global Warming Potential Gasses.** Associated with ozone depleting substance (ODS) substitutes, emissions from electricity transmission and distribution system, and gases emitted in the semiconductor manufacturing process. ODS substitutes are used in refrigeration and air conditioning equipment, solvent cleaning, foam production, fire retardants, and aerosols.

California's transportation sector was the single largest generator of GHG emissions, producing 40.1 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.7 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (9.7 percent), agriculture and forestry (7.6 percent) high GWP (4.7 percent), and recycling and waste (2.1 percent) t (CARB 2019a).

California's GHG emissions have followed a declining trend since 2007. In 2017, emissions from routine GHG emitting activities statewide were 424 $MMTCO_2e$, 5 $MMTCO_2e$ lower than 2016 levels. This represents an overall decrease of 14 percent since peak levels in 2004 and 7 $MMTCO_2e$ below the 1990 level and the state's 2020 GHG target. During the 2000 to 2017 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 $MTCO_2e$ per capita to 10.7 $MTCO_2e$ per capita in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining, representing a 41 percent decline since the 2001 peak, while the state's GDP has grown 52 percent during this period. For the first time since California started to track GHG emissions, California uses more electricity from zero-GHG sources (hydro, solar, wind, and nuclear energy). (CARB 2019b).

Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities. The amount of CO_2 in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation (IPCC 2007). These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants (CAT 2006). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime (IPCC 2007).

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on

different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

Potential Climate Change Impacts for California

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide, average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). The years from 2014 through 2016 have shown unprecedented temperatures with 2014 being the warmest (OEHHA 2018). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1 to 8.6°F, depending on emissions levels (CCCC 2012).

In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures; 2) a smaller fraction of precipitation falling as snow; 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones; 4) advanced shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms (CAT 2006). Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016, with unprecedented dry years occurring in 2014 and 2015 (OEHHA 2018). Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years occurring from 2012 to 2015 (OEHHA 2018). According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 5.6-1), and the inertia of the Earth's climate system could produce as much as 0.6°C (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table

5.6-2, and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

Table 5.6-2 Summary of GHG Emissions Risks to California

Impact Category	Potential Risk
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Fewer extremely cold nights Poor air quality made worse Higher temperatures increase ground-level ozone levels
Water Resources Impacts	Decreasing Sierra Nevada snowpack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pest and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand

Sources: CEC 2006; CEC 2009; CCCC 2012; CNRA 2014.

5.6.1.2 REGULATORY BACKGROUND

This section describes the federal, state, and local regulations applicable to GHG emissions.

Federal

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 US Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not themselves impose any emission reduction requirements but allowed the EPA to finalize the GHG standards proposed in

2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the Specific Plan's GHG emissions inventory because they constitute the majority of GHG emissions; they are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

US Mandatory Reporting Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 $MTCO_2e$ or more per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2021 to 2026)

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon in 2025. However, on March 30, 2020, the USEPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as The Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021-2026. However, consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and provides industry the certainty needed to make investments and create jobs. This commitment means that the auto companies party to the voluntary agreement will only sell cars in the United States that meet these standards (CARB 2019d).

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the Clean Air Act, the USEPA has been developing regulations for new, large stationary sources of emissions such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy (ACE) rule which became effective on August 19,2019. The ACE rule was crafted under the direction of President Trump's Energy Independence Executive Order. It officially rescinds the Clean Power Plan rule issued during the Obama Administration and sets emissions guidelines for states in developing plans to limit CO+ emissions from coal-fired power plants.

State

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Orders S-03-05 and B-30-15, Assembly Bill (AB) 32, Senate Bill (SB) 32, and SB 375.

Executive Order S-03-05

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

State of California guidance and targets for reductions in GHG emissions are generally embodied in the Global Warming Solutions Act, adopted with passage of AB 32. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 emissions reduction goal established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The first Scoping Plan was adopted by the California Air Resources Board (CARB) on December 11, 2008. The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state (CARB 2008). To effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

First Update to the Scoping Plan

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan, adopted May 22, 2014, highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, are slightly higher at 431 $MMTCO_2e$ (CARB 2014).

As identified in the Update to the Scoping Plan, California is on track to meet the goals of AB 32. The update also addresses the state's longer-term GHG goals in a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goal, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction

rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014).

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the state to 40 percent below 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197

In September 2016, Governor Brown signed Senate Bill 32 and Assembly Bill 197, making the Executive Order goal for year 2030 into a statewide, mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

2017 Climate Change Scoping Plan

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB approved the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b).

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission vehicle technologies; continued investment in renewables such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conserve agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and TACs emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZE buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.

- California Sustainable Freight Action Plan, which improves freight system efficiency by 25 percent by 2030 and utilizes near-zero emissions technology and deployment of ZE trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Continued implementation of SB 375.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the state's long-term GHG reduction goals and recommended local actions to reduce GHG emissions—for example, statewide targets of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust and quantitative locally appropriate goals that align with the statewide per capita targets and sustainable development objectives and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the state's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population) consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the "business as usual" yardstick—that is, what would the GHG emissions look like if the state did nothing at all beyond the policies that are already required and in place to achieve the 2020 limit, as shown in Table 5.6-3. It includes the existing renewables requirements, advanced clean cars, the "10 percent" LCFS, and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 $MMTCO_2e$ above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

Table 5.6-3 2017 Climate Change Scoping Plan Emissions Reductions Gap

Modeling Scenario	2030 GHG Emissions $MMTCO_2e$
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	**260**
Gap to 2030 Target	**60**

Source: CARB 2017b.

Table 5.6-4 provides estimated GHG emissions compared to 1990 levels, and the range of GHG emissions for each sector estimated for 2030.

Table 5.6-4 2017 Climate Change Scoping Plan Emissions Change by Sector

Scoping Plan Sector	1990 $MMTCO_2e$	2030 Proposed Plan Ranges $MMTCO_2e$	% Change from 1990
Agricultural	26	24 to 25	-8% to -4%
Residential and Commercial	44	38 to 40	-14% to -9%
Electric Power	108	30 to 53	-72% to -51%
High GWP	3	8 to 11	267% to 367%
Industrial	98	83 to 90	-15% to -8%
Recycling and Waste	7	8 to 9	14% to 29%
Transportation (including TCU)	152	103 to 111	-32% to -27%
Net Sink[1]	-7	TBD	TBD
Sub Total	431	294 to 339	-32% to -21%
Cap-and-Trade Program	NA	34 to 79	NA
Total	**431**	**260**	**-40%**

Source: CARB 2017b.
Notes: TCU = Transportation, Communications, and Utilities; TBD = To Be Determined.
[1] Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Kings County Association of Governments (KCAG) is the MPO for Kings County. Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. CARB adopted revised SB 375 targets for the MPOs in March 2018 (CARB 2018). The updated targets become effective on October 1, 2018. The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32), while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies, and any potential future state strategies, such as statewide road user pricing.

The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCS to achieve the SB 375 targets. CARB's updated targets for the KCAG are a 5 percent per capita GHG reduction in 2020 from 2005 levels (which is the same as the 2010 target) and a 13 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 10 percent). CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies (CARB 2018).

KCAG's RTP/SCS

In August 2018, KCAG adopted its 2018 Regional Transportation Plan/Sustainable Communities Strategy (2018 RTP/SCS), which covers the period from 2018 to 2042. The purpose of the 2018 RTP/SCS is to integrate transportation, land use, and housing in the planning process. The 2018 RTP/SCS provides the foundation for transportation decisions by local, regional, and state officials; documents the region's mobility needs and issues; identifies and attempts to resolve regional issues and provide policy and direction for local transportation plans; documents the region's goals, policies, and objectives for meeting current and future transportation mobility needs; sets forth an action plan to address transportation issues and needs consistent with regional and state policies; identifies transportation improvements in sufficient detail to aid in the development of the State Transportation Improvement Program and to be useful in making decisions related to the development and growth of the region; identifies those agencies responsible for implementing action plans; and documents the region's financial resources needed to meet mobility needs.

Chapter 12, *Sustainable Communities Strategy*, of the 2018 RTP/SCS addresses SB 375 to show how the integration of land use and transportation planning can lead to lower emissions of greenhouse gases (GHG) from passenger vehicles and light duty trucks. SB 375 reinforces linkage between the Regional Housing Need Allocation (RHNA) and SCS process to better integrate housing, land use, and transportation planning. The SCS is a regional growth strategy that provides the basis for the integration of the land use decisions made by KCAG's member agencies and the transportation investments in the region with a goal of reducing the GHG emissions form cars and light trucks in the region; the SCS must be based on "current planning assumptions."

Transportation Sector Specific Regulations

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases with requirements for greater numbers of ZE vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in CO_2e gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions 80 percent below 1990 levels.

Heavy-Duty (Tractor-Trailer) GHG Regulation

The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling

resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of three components:

- **SmartWay Transport Partnership.** Freight shippers, carriers, logistics companies and other stakeholders partner with EPA to measure, benchmark and improve logistics operations so they can reduce their environmental footprint.

- **SmartWay Brand.** Through SmartWay technology verification and branding, EPA has accelerated availability, adoption and market penetration of fuel-saving technologies and operational practices while helping companies save fuel, lower costs and reduce adverse environmental impact.

- **SmartWay Global Collaboration.** EPA works with a broad range of national and global organizations to harmonize sustainability accounting methods in the freight sector. SmartWay also provides support to global policy makers that wish to model transportation sustainability programs after the SmartWay program. (USEPA 2019a)

Through the SmartWay Technology Program, the USEPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. As a result, the USEPA has determined that the following types of technologies provide fuel-saving and/or emission-reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies—i.e., less idling of the engine when it is not needed—would reduce fuel consumption.

- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.

- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel will eventually slow down because of this resistance.

- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc. that would reduce emissions.

- Federal excise tax exemptions. (USEPA 2019b)

Phase I and 2 Heavy-Duty Vehicle GHG Standards

CARB has adopted a new regulation for GHG emissions from heavy-duty trucks and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the USEPA rule for new trucks and engines nationally. Existing heavy-duty vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer Greenhouse Gas Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation.

In September 2011, the USEPA adopted their new rule for heavy-duty trucks and engines. The USEPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements begin with model year (MY) 2014 with stringency levels increasing through MY 2018. The rule organizes truck compliance into three groupings, which include a) heavy-duty pickups and vans; b) vocational vehicles; and c) combination tractors. The USEPA rule does not regulate trailers.

CARB staff has worked jointly with the USEPA and the National Highway Traffic Safety Administration (NHTSA) on the next phase of federal GHG emission standards for medium- and heavy-duty vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later model year heavy-duty vehicles, including trailers.

The USEPA and NHTSA issued a Notice of Proposed Rulemaking for Phase 2 in June 2015 and published the final rule in October 2016. On February 8, 2018, the Board approved the proposed Phase 2 standards, with direction to staff to make additional 15-day changes (CARB 2019c, USEPA 2019c).

Renewables Portfolio – Carbon Neutrality Regulations

Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill also establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18

Executive Order B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Energy Efficiency Regulations

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2019 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings are 30 percent more energy efficient compared to the 2016 standards, and single-family homes are 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.[4] The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and were last updated in 2019. The 2019 CALGreen standards became effective January 1, 2020.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006 and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Solid Waste Diversion Regulations

AB 939: Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

AB 1327

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

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

AB 1826

In October of 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

Water Efficiency Regulations

SBX7-7

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

AB 1881 – Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Short-Lived Climate Pollutant Reduction Strategy

Senate Bill 1383

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH_4. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB

2017a). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

5.6.1.3 EXISTING CONDITIONS

The Plan Area mainly consists of almond orchards, in addition to grazing land and other crops, such as pistachios, apricots, and plums. In order to provide a conservative analysis of the increase in GHG emissions generated by the Specific Plan, onsite emissions within the Plan Area are considered to be nominal.

5.6.2 Thresholds of Significance

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

GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

San Joaquin Valley Air Pollution Control District

The issue of global climate change is, by definition, a cumulative environmental impact. The SJVAPCD adopted Guidance Methodology for addressing GHG emissions under CEQA on December 17, 2009 (SJVAPCD 2009a). In addition, SJVAPCD adopted a Climate Change Action Plan (CCAP) to identify strategies to reduce GHG emissions in the SJVAPCD (SJVAPCD 2009b). SJVAPCD's methodology includes a tiered approach:

- If a project is exempt from CEQA, individual-level and cumulative GHG emissions are treated as less than significant.
- If the project complies with a GHG emissions reduction plan or mitigation programs that avoid or substantially reduce GHG emissions in the geographic area where the project is located (i.e., city or county), individual-level and cumulative GHG emissions are treated as less than significant.
- SJVAPCD does not have thresholds of significance for construction-related GHG emissions. Construction emissions are one-time, nonrecurring emissions. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires its first major renovation (IEA 2008). Therefore, construction emissions are amortized over a 30-year duration and included in the operational emissions analysis.

SJVAPCD's methodology for evaluating GHG emissions impacts also includes methodology to evaluate whether a project would comply with AB 32 by conducting an analysis of whether the project would reduce GHG emissions by 29 percent from business as usual (BAU) through implementation of Best Performance Standards. The November 30, 2015, *Center for Biological Diversity v. California Department of Fish and Wildlife*

(Newhall Ranch) ruling effectively limits use of this performance metric. The 29 percent below BAU established in the CARB Scoping Plan is derived from the statewide reduction target set by AB 32 for year 2020. The court held that the 29 percent is the statewide goal, but there is no substantial evidence that establishes a nexus between the Statewide goal and the percent reduction a specific land use project would need to achieve to be consistent with the goals of AB 32. Projects must determine the reduction target specific to the land use type being proposed.

Because SJVAPCD's significance criteria does not establish a nexus that connects the statewide GHG emissions reductions identified in the Scoping Plan to reductions needed for new development projects, an alternative approach to use of the performance metric is being used by the District until SJVAPCD revises their Guidance Methodology to address the Newhall Ranch ruling.

Bright-Line Significance Threshold

The bright-line significance threshold is a numeric, mass emissions threshold. In general, the bright-line threshold identifies the point at which additional analysis of project-related GHG emissions impacts is necessary. Projects below the established bright-line significance criteria have a *de minimus* contribution to the local, regional, and/or statewide GHG emissions inventory and have less than significant impacts. Projects above this threshold may result in a substantial increase in GHG emissions.

The bright-line threshold is based on the methodology identified in the 2008 California Air Pollution Control Officers Association (CAPCOA) white paper (CAPCOA 2008). It is based on the market capture approach and reflects the amount of emissions that 90 percent of development projects surveyed in four cities within California would generate. CAPCOA identified that a bright-line threshold set at 900 $MTCO_2e$ per year would capture 90 percent of projects. In general, 900 $MTCO_2e$ per year corresponds to (1) a residential development of 50 dwelling units; (2) 35,000 square feet of office space; (3) 11,000 square feet of retail space; and (4) 6,300 square feet of supermarket space.[5]

The 900 $MTCO_2e$ per year ($MTCO_2e$/yr) threshold is used in this DEIR because it is the most conservative bright-line threshold. Exceeding the bright-line significance criteria does not necessarily indicate that the proposed project would generate a significant unavoidable impact.

Mass Emissions and Health Effects

On December 24, 2018, in the case, *Sierra Club et al. v. County of Fresno et al.* (Friant Ranch), the California Supreme Court determined that the EIR for the proposed Friant Ranch project failed to adequately analyze the project's air quality impacts on human health. The EIR prepared for the project, which involved a master planned retirement community in Fresno County, showed that project-related mass emissions would exceed the SJVAPCD's regional significance thresholds. In its findings, the California Supreme Court affirmed the

[5] The Bay Area Air Quality Management District (BAAQMD) and South Coast Air Quality Management District (South Coast AQMD) have also established bright-line screening thresholds of 1,100 $MTCO_2e$ and 3,000 $MTCO_2e$ per year, respectively, for development projects based on similar market capture methodologies utilized by CAPCOA. South Coast AQMD based their bright-line screening threshold on review of 711 CEQA projects and determined that 90 percent of the projects reviewed would exceed 3,000 $MTCO_2e$ per year (South Coast AQMD 2009). Similarly, the bright-line screening threshold established by BAAQMD captures approximately 59 percent of all development projects (BAAQMD 2017).

holding of the Court of Appeal that EIRs for projects must not only identify impacts to human health, but also provide an "analysis of the correlation between the project's emissions and human health impacts" related to each criteria air pollutant that exceeds the regional significance thresholds or explain why it could not make such a connection. In general, the ruling focuses on the correlation of emissions of toxic air contaminants and criteria air pollutants and their impact to human health.

In 2009, the US EPA issued an endangerment finding for six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) in order to regulate GHG emissions from passenger vehicles. The endangerment finding is based on evidence that shows an increase in mortality and morbidity associated with increases in average temperatures, which increase the likelihood of heat waves and ozone levels. The effects of climate change are identified in Table 5.6-2. While these identified effects such as sea level rise and increased in extreme weather, can indirectly impact human health, neither the EPA nor CARB has established ambient air quality standards for GHG emissions. The state's GHG reduction strategy outlines a path to avoid the most catastrophic effects of climate change. Yet the state's GHG reduction goals and strategies are based on the state's path toward reducing statewide cumulative GHGs as outlined in AB 32, SB 32, and Executive Order S-03-05. As described further below, the two significance thresholds that the County uses to analyze GHG impacts are based on achieving those statewide GHG reduction goals. Further, because no single project is large enough to result in a measurable increase in global concentration of GHG emissions, climate change impacts of a project are considered on a cumulative basis. Without federal ambient air quality standards for GHG emissions and given the cumulative nature of GHG emissions and the City's significance thresholds that are tied to reducing the state's cumulative GHG emissions, it is not feasible at this time to connect the project's specific GHG emission to the potential health impacts of climate change.

5.6.3 Environmental Impacts

5.6.3.1 METHODOLOGY

This GHG evaluation was prepared in accordance with the requirements of CEQA to determine if significant GHG impacts are likely in conjunction with the Specific Plan. The analysis in this section is based on buildout of Phase One and the overall Specific Plan for the following sectors:

- **Transportation.** The annual VMT is based on the average daily trip (ADT) generation and average trip distance traveled for trucks and passenger vehicles as provided by Kittelson (see Appendix G1 and Appendix G2 of this DEIR). Table 5.6-5 provides a summary of the trip generation and VMT for Phases One and Two of the Specific Plan, as well as for full buildout. As shown in the table, truck trips constitute 30 percent of total trips (total passenger plus truck trips) and for purposes of this analysis, all trucks are assumed to be heavy-heavy duty trucks. Additionally, the trip lengths provided under each phase are an average based on traffic data provided by Kittelson. Also, for purposes of the air quality modeling conducted, the traffic data was compiled to develop the combined trip lengths to conform to CalEEMod methodology. Furthermore, diverted trips[6] and its associated VMT are accounted for in the

[6] Unlike new trips generated by a development project, diverted trips are trips that are already in the circulation network and divert from their path to reach the project during a trip between their main origin and destination. For the case of Jackson Ranch,

totals shown in the table. Diverted trips account for an average trip length of 0.5 mile/diverted trip. For further details, refer to Appendix C of this DEIR.

Table 5.6-5 Project Trip Generation and VMT

	Phase One		Phase Two		Buildout[1]	
	Passenger Vehicles	Trucks[2]	Passenger Vehicles	Trucks[2]	Passenger Vehicles	Trucks[2]
Annual Trips[3,4]	2,755,584	1,181,128	1,275,196	546,468	4,030,780	1,727,596
Annual VMT[3,4]	27,258,036	92,538,680	1,765,296	59,202,936	29,023,332	151,741,616
Average Trip Length (miles/trip)	9.89	78.35	1.38	108.34	7.20	87.83

Source: See Appendix G1 and Appendix G2 of this DEIR.
1 Consists of buildout of Phases One and Two.
2 Trucks generate 30 percent of total daily trips on average.
3 Based on 364 days per year per CalEEMod methodology.
4 Includes diverted trips and VMT.

The default CalEEMod emissions rates for year 2023 (Phase One opening year) and year 2040 (full buildout [Phases One and Two] year) were updated with emission rates derived from EMFAC2017, Version 1.0.2, and CalEEMod methodology. The primary source of mobile-source GHG emissions are tailpipe exhaust emissions from the combustion of fuel (i.e., gasoline and diesel).

- **Transport Refrigeration Units.** Emissions from transport refrigeration units (TRUs) are based on the operation of 75 trucks with TRUs per day Monday through Thursday and 76 trucks per day Friday through Sunday, 120 minutes of idling per unit per day, and calendar year 2040 aggregated emission rates for various TRU types obtained from OFFROAD2017, Version 1.0.1.
- **Area Sources.** Area source emissions from use of landscaping equipment are based on CalEEMod default values and the square footage of the proposed buildings and surface parking lot areas.
- **Energy.** Emissions of GHG from energy use (electricity and natural gas) are based on the CalEEMod defaults for electricity and natural gas usage by nonresidential land uses. New buildings are modeled to comply with the 2019 Building Energy Efficiency Standards, which are 30 percent more energy efficient for nonresidential buildings than the 2016 Building Energy Efficiency Standards. For the year 2023 scenario, the CO_2 intensity factor of the purchased electricity is based on Pacific Gas and Electric's (PG&E) reported CO_2e intensity factor for year 2018 (PG&E 2019). For the full buildout year 2040 scenario, this reported CO_2 intensity factor is adjusted to account for the reduction in carbon intensity of the energy supply required under the 60 percent RPS established for year 2030. Intensity factors for CO_2, CH_4, and N_2O provided in CARB's Local Governments Protocol (LGOP), version 1.1, were used for natural gas.
- **Solid Waste Disposal.** Indirect emissions from waste generation are based on CalRecycle solid waste generation rates (see Table 5.13-5, *Estimate Solid Waste Generation*, for further details).

diverted trips are drivers already traveling along I-5 and simply making a stop to buy food or purchase gas as they make their way back onto the freeway and continue to their main origin and destination

- **Water.** Emissions from this sector are based on the Water Supply Assessment (WSA) conducted for the Specific Plan (see Table 5.13-1, *Projected Water Demand Estimate for the Specific Plan*). Emissions of GHG are associated with the embodied energy used to supply, treat, and distribute water.
- **Wastewater Treatment Facility (WWTF).** Based on CalEEMod methodology, emissions associated with the WWTF are accounted for in the water sector. Water sector emissions account for the indirect emissions associated with the energy used to supply, distribute, and treat water and wastewater. Additionally, the direct emissions associated with treatment of wastewater are also accounted.
- **Construction.** Construction of development projects accommodated by the Specific Plan is anticipated to occur based on the market demand for facilities in the Plan Area. Emissions modeling is based on buildout of Phase One in 2023 and buildout of Phase Two, or the overall Specific Plan in 2040. Emissions of GHG would primarily be from operation of off-road construction equipment in addition to construction worker, vendor, and haul vehicles. It is assumed that 50 percent of all asphalt demolition debris material would be recycled onsite and reused while the remaining debris would be hauled to an offsite location.

Life cycle emissions are not included in this analysis because not enough information is available for the Specific Plan, and therefore life cycle GHG emissions would be speculative.[7] Black carbon emissions are not included in the GHG analysis because CARB does not include this pollutant in the state's AB 32 inventory but treats this short-lived climate pollutant separately.[8] GHG modeling is included in Appendix C of this DEIR.

5.6.3.2 IMPACT ANALYSIS

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

Impact 5.6-1: Operation of the Specific Plan would result in a substantial increase in GHG emissions. [Threshold GHG-1])

Impact Analysis: Implementation of development projects accommodated by the Specific Plan (under the Plan Area Buildout and Phase One Buildout) could contribute to global climate change through direct emissions of GHGs from onsite area sources and vehicle trips generated by the project, and indirectly through offsite energy production required for onsite activities, water use, and waste disposal on 41 percent

[7] Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

[8] Particulate matter emissions, which include black carbon, are analyzed in Section 5.2, *Air Quality*. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017a).

of the Plan Area associated with the proposed travel-oriented services.[9] Because no single project is large enough to result in a measurable increase in global concentrations of GHG emissions, climate change impacts of a project are considered on a cumulative basis.

Annual GHG emissions were calculated for construction and operation of the Specific Plan and are shown in Table 5.6-6. The project operational phase emissions are from operation of the proposed land uses, off-road equipment used for daily operations, and from project-related vehicle trips. Construction emissions were amortized into the operational phase.

Table 5.6-6 Operational Phase GHG Emissions

Source	GHG Emissions ($MTCO_2e$ Per Year)	
	Phase One (2023)	Plan Area Buildout (2040)
Area	<1	<1
Energy[1]	492	3,488
Mobile – Passenger Vehicles	8,345[2]	6,219[3]
Mobile – Transport Trucks[4]	124,269	152,879
Transport Refrigeration Units[5,6]	N/A	72
Off-Road Equipment[7]	N/A	9,000
Solid Waste	69	1,142
Water[8]	9	16
Construction-Amortized[9]	116	2,262
Total All Sectors	**133,301**	**175,077**
Bright-Line Threshold	900 $MTCO_2e$	900 $MTCO_2e$
Exceeds Threshold?	**Yes**	**Yes**

Source: CalEEMod, Version 2016.3.2.
Notes: Manual summation of emissions may not equal to the shown total due to rounding.
1 Buildings constructed after January 1, 2020 are required to meet the 2019 Building Energy Efficiency Standards. Modeling also includes applicable water efficiency improvements required under CALGreen.
2 Based on calendar year 2023 aggregated emission rates derived EMFAC2017 Version 1.0.2 and CalEEMod methodology.
3 Based on calendar year 2040 aggregated emission rates derived EMFAC2017 Version 1.0.2 and CalEEMod methodology.
4 All trucks modeled as heavy-heavy duty trucks.
5 Based on calendar year 2040 emission rates for various TRUs obtained from OFFROAD2017 Version 1.0.1.
6 Based on 76 trucks with TRUs per day and 120 mins of idling per truck per day.
7 Based on 140 CNG-powered forklifts and 7 diesel-powered yard trucks operating onsite. Forklift and yard truck emissions are based on calendar year 2040 OFFROAD2017, Version 1.0.1, emission factors for a 100-horsepower industrial forklift and 175-horsepower rail yard tractor, respectively.
8 Per CalEEMod methodology, water sector emissions account for the indirect emissions associated with the energy used to supply, distribute, and treat water and wastewater. Additionally, the direct emissions associated with treatment of wastewater are also accounted.
9 Construction emissions are amortized over a 30-year project lifetime based on the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation (IEA 2008).

Specific Plan – Plan Area Buildout

As shown in Table 5.6-6, the primary sources of project-related emissions would be from mobile-source emissions generated from passenger vehicles and trucks. The next largest sources of emissions would be from energy usage followed by solid waste. Overall, development of the Specific Plan would generate annual GHG emissions of 175,077 $MTCO_2e$ per year and would exceed the bright-line threshold of 900 $MTCO_2e$

[9] The remaining 59 percent of the Plan Area would remain under agricultural production and would not result in a net increase in emissions.

per year. Therefore, GHG emissions generated by the Specific Plan buildout would be considered to cumulatively contribute to statewide GHG emissions and impacts are potentially significant.

Specific Plan – Phase One Buildout

As shown in Table 5.6-6, development of Phase One would generate annual GHG emissions of 133,301 $MTCO_2e$ during opening year 2023 and would exceed the bright-line threshold of 900 $MTCO_2e$ per year. Therefore, GHG emissions generated by Phase One of the Specific Plan would be considered to cumulatively contribute to statewide GHG emissions and impacts are potentially significant.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description*, implementation of the Specific Plan would include installation of an offsite water main system to provide potable water to future uses of the Plan Area. The water main would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The roadway is a north-south, two-lane road that is surrounded by agricultural uses on both sides and runs from the Plan Area to Kettleman City. The water main would stretch along this roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Installation of the offsite water main improvements would result in construction-related emissions. For purposes of this analysis, construction of the water main improvements is evaluated as part of Phase One. As discussed above, development of Phase One and implementation of the Specific Plan would result in overall emissions exceeding the bright-line threshold of 900 $MTCO_2e$ per year. Thus, construction-related GHG emissions associated with the proposed offsite water main improvements would be considered to cumulatively contribute to statewide GHG emissions and impacts are potentially significant.

Impact 5.6-2: Implementation of the Specific Plan would not conflict with applicable GHG reduction plans. [Threshold GHG-2])

Impact Analysis: Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and KCAG's RTP/SCS. The consistency analyses with these plans are presented below.

Specific Plan – Plan Area Buildout

CARB Scoping Plan

CARB's Scoping Plan is the State's strategy to achieve the GHG emissions reduction goals under AB 32 and SB 32, as well as a long-term strategy to achieve the state's overall carbon neutrality goals for 2050 under Executive Order S-03-05. The CARB Scoping Plan is applicable to state agencies but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require the County to adopt policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the state agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the

building and landscape codes, and other statewide actions that affect a local jurisdiction's emissions inventory from the top down.

Transportation Sector

Trucks

Approximately 91 percent of the Specific Plan's emissions are from the transportation sector, and over 96 percent of the project's emissions are associated with VMT generated by trucks. In general, the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

Emissions associated with heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The following state strategies reduce GHG emissions from the medium and heavy duty trucks:

- CARB's Mobile Source Strategy focuses on reducing GHGs through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks (CARB 2017b).
- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25 percent by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030 (CARB 2017b).
- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions.

Thus, these strategies would contribute in controlling heavy duty truck GHG emissions associated with the Specific Plan. Development accommodated by the Specific Plan would not conflict with the statewide strategies. Trucks onsite are required to comply with CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation, which requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated GHG emissions.

Passenger Vehicles

Approximately four percent of the emissions associated with the Specific Plan are associated with VMT generated by passenger vehicles. Statewide strategies to reduce GHG emissions from passenger vehicles and the transportation sector in general include the LCFS and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars program).

Energy / Commercial Sector

Energy use generated by the project represents the second largest source of emissions (15 percent) after the transportation sector. New buildings within the Plan Area would meet the current CALGreen and Building Energy Efficiency standards and would be solar-ready. In addition to being energy-efficient, over the long-term, energy demand generated by the Specific Plan would continue to meet with energy from sources with lower carbon intensity as a result of the state's carbon neutrality goals established under Executive Order B-55-18. SB 100 sets the RPS at 60 percent by 2030 and 100 percent by 2045. As a result, over time, GHG emissions from the energy sector will decrease. As evidenced by CARB's documentation of GHG emissions trends, in 2017 California generated more electricity from zero-GHG sources than GHG-emitting sources (CARB 2019b). Therefore, the Specific Plan would be consistent with the state's goals for this sector.

Other Sources

Other sources of GHG emissions represent approximately 9 percent of the emissions inventory, with the vast majority from solid waste disposal (8 percent), which is associated with landfilling municipal solid waste. The amount of methane emitted to the atmosphere as a fraction of the total amount of methane generated from the decomposition of accumulated waste has gradually declined over time as more landfills install landfill gas collection and control systems and existing systems are operated more efficiently as a result of CARB's Landfill Methane Control Measure (CARB 2019b). Therefore, the Specific Plan would be consistent with the state's goals for the recycling and waste sector.

Development projects accommodated under the Specific Plan are required to adhere to the programs and regulations identified by the Scoping Plan and implemented by state, regional, and local agencies to achieve the statewide GHG reduction goals of AB 32 and SB 32. These future individual development projects would comply with these statewide GHG emissions reduction measures. Project GHG emissions shown in Table 5.6-6 include reductions associated with statewide strategies that have been adopted since AB 32 and SB 32. Therefore, the Specific Plan would not obstruct implementation of the CARB Scoping Plan.

KCAG RTP/SCS

The 2018 RTP/SCS identifies regional strategies to better integrate housing, land use, and transportation planning in Kings County. The SCS is a regional growth strategy that provides the basis for the integration of the land use decisions made by KCAG's member agencies and the transportation investments in the region with a goal of reducing the GHG emissions form cars and light trucks in the region; the SCS must be based on "current planning assumptions." The RTP also includes the County's strategy for goods movement. Although, this is not included as part of its SCS since SB 375 focuses on reductions in VMT per capita for passenger vehicles and light trucks (i.e., excludes commercial trucks). It should be noted that Kings County experiences a much higher percentage of trucks on its highways than most other counties. The majority of these vehicles move agricultural products (KCAG 2018). The Specific Plan's consistency with the applicable 2018 RTP/SCS policies is discussed in Section 5.8, *Land Use and Planning*. As identified in this section, implementation of the Specific Plan would not conflict with the SCS/RTP and the impact would be less than significant.

Specific Plan – Phase One Buildout

Impacts identified for the Specific Plan – Plan Area Buildout are the same for Specific Plan – Phase One Buildout. As substantiated in this section, the Specific Plan would not conflict with the CARB Scoping Plan or the KCAG SCS/RTP and the impact would be less than significant.

Specific Plan – Offsite Water Infrastructure Improvements

The proposed offsite water main improvements are infrastructure improvements that do not have the potential to conflict with the CARB Scoping Plan or KCAG SCS/RTP. Therefore, no impacts are anticipated to occur.

5.6.4 Cumulative Impacts

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under Impact 5.6-1 are not project-specific impacts, but the Specific Plan's contribution to cumulative GHG impact. As discussed in Section 5.6.6 below, incorporation of mitigation would contribute in minimizing emissions. However, implementation of the Specific Plan (under both the Phase One and Plan Area buildout conditions) would still result in annual emissions that exceed the GHG emissions significance threshold of 900 $MTCO_2e$/yr. Therefore, project-related GHG emissions and their contribution to global climate change would be cumulatively considerable, and GHG emissions impacts would be significant.

5.6.5 Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to air quality apply to the Specific Plan and are described in detail in Section 5.6.1.2, *Regulatory Background*, above.

- Executive Order S-03-05 – Greenhouse Gas Emission Reduction Targets
- AB 32 – California Global Warming Solutions Act
- AB 939 – California Integrated Waste Management Action of 1989
- AB 1493 – Pavley Fuel Efficiency Standards
- AB 1881 – California Water Conservation in Landscaping Act of 2006
- SB 350 – Clean Energy and Pollution Reduction Act of 2015
- SB 375 – Sustainable Communities Strategies
- SB 1078 – Renewable Portfolio Standards
- Title 13, California Code of Regulations: California Advanced Clean Cars
- Title 13, California Code of Regulations: Low-Emission Vehicle Program – LEV III
- Title 20 California Code of Regulations: Appliance Energy Efficiency Standards
- Title 17 California Code of Regulations: Low Carbon Fuel Standard
- Title 24, Part 6, California Code of Regulations: Building and Energy Efficiency Standards
- Title 24, Part 11, California Code of Regulations: Green Building Standards Code

5.6.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.6-2.

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

- **Impact 5.6-1** Operation of the Specific Plan would result in a substantial increase in GHG emissions

5.6.7 Mitigation Measures

Impact 5.6-1

Specific Plan – Plan Area Buildout

Transportation Sector

GHG-1 Applicants for development projects within the area covered by the Jackson Ranch Specific Plan shall design the proposed surface parking lots to provide parking for low-emitting, fuel-efficient, and carpool/van vehicles. At minimum, the number of preferential parking spaces shall be equal to the Tier 2 Nonresidential Voluntary Measures of California's Green Building Standards Code Section A5.106.5.1.2.

GHG-2 Applicants for development projects within the area covered by the Jackson Ranch Specific Plan shall design the proposed surface parking lots to provide electric vehicle (EV) charging stations. At minimum, the number of EV charging stations shall be equal to the Tier 2 Nonresidential Voluntary Measures of California's Green Building Standards Code Section A5.106.5.3.2.

Mitigation Measures AQ-3 through AQ-7 from Section 5.2, *Air Quality*, apply and would reduce GHG emissions of the Specific Plan.

Specific Plan – Phase One Buildout

Mitigation Measures GHG-1, GHG-2, and AQ-3 through AQ-7 also apply here.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

5.6.8 Level of Significance After Mitigation

Impact 5.6-1

The Specific Plan would result in a substantial increase in greenhouse gas (GHG) emissions. Mitigation Measures GHG-1 and GHG-2 in addition to Mitigation Measures AQ-3 through AQ-7 would reduce GHG emissions to the extent feasible. However, the number of people who may utilize zero- and near-zero

emission vehicles and/or electric standby or hybrid electric TRUs is uncertain. As a result, the total reductions that the services provided through these mitigation measures would provide cannot be quantified. Neither the project applicant nor the lead agency (Kings County) can substantively or materially affect reductions in project mobile-source emissions beyond the regulatory requirements. Therefore, Impact 5.6-1 for the Specific Plan (under both the Phase One and Plan Area buildout conditions) would remain ***significant and unavoidable***.

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5.7 HYDROLOGY AND WATER QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts of the Jackson Ranch Specific Plan (Specific Plan) with respect to hydrology and water quality conditions in unincorporated Kings County—specifically, the area covered by the Specific Plan (Plan Area) and its surroundings. Hydrology deals with the distribution and circulation of water, both on land and underground. Water quality deals with the quality of surface- and groundwater. Surface water includes lakes, rivers, streams, and creeks; groundwater is under the earth's surface.

5.7.1 Environmental Setting

5.7.1.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, or guidelines related to hydrology and water quality that are applicable to the Specific Plan are summarized below.

Federal

Clean Water Act and National Pollution Elimination Discharge System

The Clean Water Act establishes regulations to control the discharge of pollutants into the waters of the United States and regulates water quality standards for surface waters (US Code, Title 33, §§ 1251 et seq.). Under the act, the US Environment Protection Agency (EPA) is authorized to set wastewater standards and runs the National Pollutant Discharge Elimination System (NPDES) permit program. Under the NPDES program, permits are required for all new developments that discharge directly into Waters of the United States. The federal Clean Water Act requires wastewater treatment of all effluent before it is discharged into surface waters. NPDES permits for such discharges in the project region are issued by the Central Valley Regional Water Quality Control Board (RWQCB).

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times since it came into law. The Act authorizes the EPA to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Water Resources Control Board (SWRCB) conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

State

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.), which was passed in California in 1969 and amended in 2013, the SWRCB has authority over State water rights and water quality policy. This Act divided the state into nine regional basins, each under the jurisdiction of a RWQCB to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions. RWQCBs regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. The Plan Area is within the jurisdiction of the Central Valley RWQCB.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline (CDWR 2019).

State Water Resources Control Board Construction General Permit

SWRCB has adopted a statewide Construction General Permit under Water Quality Order 2009-0009-DWQ (as amended Orders No. 2010-0014-DWQ and No. 2012-0006-DWQ) for stormwater discharges associated with construction activity. These regulations prohibit the discharge of stormwater from construction projects that include one acre or more of soil disturbance. Construction activities subject to this permit include clearing, grading, and other disturbance to the ground, such as stockpiling or excavation, that results in soil disturbance of at least one acre of total land area. Individual developers are required to submit Permit Registration Documents (PRDs) to SWRCB for coverage under the NPDES permit prior to the start of construction. The PRDs include a Notice of Intent, risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to SWRCB via the Stormwater Multiple Application and Report Tracking System website.

The NPDES Construction General Permit requires all dischargers to (1) develop and implement a SWPPP, which specifies best management practices (BMPs) to be used during construction of the project; (2) eliminate or reduce non-storm water discharge to stormwater conveyance systems; and (3) develop and implement a monitoring program of all specified BMPs. The two major objectives of the SWPPP are to (1) help identify the sources of sediment and other pollutants that affect the water quality of stormwater discharges and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-storm water discharges.

The updated Construction General Permit (2012-0006-DWQ), effective on September 2, 2012, also requires applicants to comply with post-construction runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 permit.

California Water Code

The California Water Code Section 13260(a), pursuant to the Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (Order No. 2003-0003-DWQ), states that persons discharging or proposing to discharge waste that could affect the quality of the waters of the state, other than into a community sewer system, shall file a Report of Waste Discharge (ROWD) containing information that may be required by the appropriate RWQCB.

Regional

Water Quality Control Plan for the Tulare Lake Basin

The Water Quality Control Plan for the Tulare Lake Basin (Basin Plan) establishes water quality standards for the ground and surface waters of the region and includes an implementation plan describing the actions by the Regional Board and others that are necessary to achieve and maintain the water quality standards. The Regional Board regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under various programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes of the water quality problems, if known. For waterbodies with water quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The latest Basin Plan was issued in May 2018.

For onsite wastewater treatment plants (WWTPs), waste discharge requirements must implement the requirements of the Basin Plan. Prohibitions and/or water quality objectives in the Basin Plan govern the discharge from the WWTP.

Tulare Lake Subbasin Groundwater Sustainability Plan

The Tulare Lake Subbasin Groundwater Sustainability Plan (GSP) was developed pursuant to the SGMA in order to achieve long-term groundwater sustainability in the Tulare Lake Groundwater Subbasin. GSPs are required under SGMA to bring the groundwater basin into a balanced level of pumping and recharge by 2040 (SWKGSA 2019).

Kings County Stormwater Management Program

Pursuant to direction from RWQCB, Kings County is required to prepare a Storm Water Management Program (SWMP). The purpose of the County's SWMP is to develop a series of BMPs to reduce the discharge of pollutants from the storm drain systems to the maximum extent practicable, to protect water quality, and to meet the requirements of the Phase II MS4 permit.

Kings County Improvement Standards

The Kings County Improvement Standards specify the design improvements for streets, storm drains, sanitary sewers, and water supply. The design standards for drainage systems are provided in Article 4 of the

Improvement Standards. This article includes storm drainage fees, hydrologic and hydraulic design requirements, the types of drainage systems permitted, and drainage construction requirements.

5.7.1.2 EXISTING CONDITIONS

Regional Hydrology

Kings County is in the hydrologic system referred to as the Tulare Lake Basin, which also includes San Benito County, Fresno County, Tulare County, and Kern County. The basin can be divided into three main hydrologic subareas: the northern alluvial fan and basin area (in the vicinity of the Kings, Kaweah, and Tule rivers and their tributaries), the Tulare Lake Zone, and the southwestern uplands (including the areas west of the California Aqueduct and Highway 5). The alluvial fan/basin subarea is characterized by southwest to south flowing rivers, creeks, and irrigation canal systems that convey surface water from the Sierra Nevada to the west toward the Tulare Lakebed. The Kings River is the primary source of irrigation water for the area. The River provides irrigation water to more than one million acres of agricultural land in Fresno, Tulare, and Kings counties. Tulare Lakebed is a remnant of a much larger Pleistocene lake that once occupied most of the basin (Kings County 2009).

The Plan Area is within the Tulare Lake Groundwater Subbasin, which is within the larger San Joaquin Valley Groundwater Basin. The Tulare Lake Groundwater Subbasin is mostly within the Kings County, with small portions in Tulare County and Kern County, and covers approximately 837 square miles. The Tulare Lake Groundwater Subbasin is bounded on the south by the Kings-Kern County line, on the west by the California Aqueduct, on the north by the Kings Groundwater Subbasin, and on the east by the Kaweah and Tule Groundwater Subbasins. The subbasin is classified as a high priority subbasin by the California Department of Water Resources (DWR) and is critically over drafted.

Five local groundwater sustainability agencies cooperatively manage the subbasin. The newly formed Southwest Kings Groundwater Sustainability Agency (SWKGSA) regulates the use of groundwater in the Plan Area. The public and private agencies within SWKGSA are Dudley Ridge Water District, Tulare Lake Reclamation District, Kettleman City Community Services District (KCCSD), and Tulare Lake Basin Water Storage District. Due to the poor yield and quality of the groundwater within the potion of the subbasin managed by SWKGSA, only a minimal quantity of groundwater is pumped from the subbasin. Groundwater levels, water quality, and subsidence are maintained at current levels (SWKGSA 2019).

Local Hydrology

The Plan Area is generally flat, having a high point of approximately 298 feet above mean sea level (msl) along the northwestern portion of the boundary, and a low point of approximately 240 feet msl at the eastern corner, adjacent to Interstate 5. The slope varies from a maximum of three percent between the California Aqueduct and 25th Avenue, to a slope of one percent between 25th Avenue and Interstate 5.

There are no local or regional stormwater drainage improvements in or surrounding the Plan Area. Since the Plan Area is currently agricultural or fallow land, most stormwater percolates into the soil with little runoff.

Regional Drainage

The Kings County storm water system primarily consists of roadside ditches that collect runoff from roadways. A comprehensive storm drain master plan does not exist for the County. There is only a limited amount of storm drain systems in the County, primarily in the community of Armona and several County Service Areas. Developers in the County have been required to develop site-specific solutions to storm drainage issues.

The topography of the County is relatively flat. Due to the topography, the common method of storm water collection and disposal is to use detention basins or remnants of sloughs that had once served as natural drainages (Kings County 2012).

Local Drainage

No ephemeral, perennial streams or surface waters are in the vicinity of the Plan Area and no streams or rivers traverse the Plan Area. The closest surface water body is the California Aqueduct located approximately 0.5 miles west of the Plan Area.

Groundwater Quality

In general, chemicals of concern that affect groundwater quality in the San Joaquin Valley Groundwater Basin include salinity (TDS), arsenic, nitrate, and volatile organic chemicals (VOCs). Groundwater in the vicinity of the Plan Area is high in arsenic and VOCs (SWKGSA 2019).

Arsenic and benzene have historically been detected in the two municipal wells in Kettleman City, an unincorporated community of the County approximately six miles to the northwest. In 1998, both municipal wells were equipped with an aeration treatment system to reduce the level of benzene to less than 0.5 microgram per liter)µg/L). This level is below the state drinking water standard of 1 µg/L. Arsenic, however, cannot be removed by the same water treatment process. The water is also disinfected with chlorine (CalEPA and DPH 2010).

5.7.2 Thresholds of Significance

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

HYD-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

HYD-2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

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

i) Result in substantial erosion or siltation on- or off-site.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

iv) Impede or redirect flood flows.

HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

HYD-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold HYD-3 (iv)
- Threshold HYD-4

Therefore, these impacts will not be addressed in the following analysis.

5.7.3 Environmental Impacts

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

Impact 5.7-1: Development pursuant to the Specific Plan could violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. [Threshold HYD-1]

Impact Analysis. Following is a discussion of the potential water quality impacts resulting from urban runoff that would be generated during the construction and operational phases of development projects that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area (Phase One Buildout), which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Construction Phase

Construction-related runoff pollutants are typically generated from ground-disturbance activities (e.g., clearing, grading, excavation) and from waste and hazardous materials handling or storage areas, outdoor work areas, material storage areas, and general maintenance areas (e.g., vehicle or equipment fueling and maintenance, including washing). Clearing, grading, excavation, and construction activities associated with the development of the Plan Area that would be accommodated by the Specific Plan have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials, such as fuels, solvents, and paints may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment onsite during construction may result in oil, grease, or related pollutant leaks and spills.

Construction-related activities that are primarily responsible for sediment releases are related to exposing previously stabilized soils to potential mobilization by rainfall/runoff and wind. Such activities include removing vegetation from the site, grading the site, and trenching for infrastructure improvements. Environmental factors that affect erosion include topographic, soil, and rainfall characteristics. Non-sediment-related pollutants that are also of concern during construction relate to non-stormwater flows and generally include construction materials (e.g., paint and stucco); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete and related cutting or curing residues. Construction-related activities of development projects accommodate by the Specific Plan would generate pollutants that could adversely affect water quality if appropriate and effective stormwater and non-stormwater management measures are not used to keep pollutants out of and remove pollutants from urban runoff.

To minimize these potential impacts, individual development projects would require compliance with the Construction General Permit (CGP) Water Quality Order 2009-0009-DWQ (as amended by Order No. 2010-0014-DWQ and 2012-006-DWQ), which requires the preparation and implementation of a SWPPP. A SWPPP requires the incorporation of BMPs to control sediment, erosion, and hazardous materials contamination of runoff during construction and prevent contaminants from reaching receiving water bodies. SWRCB mandates that projects that disturb one or more acres of land must obtain coverage under the statewide CGP. The CGP also requires that prior to the start of construction activities, project applicants are required to file PRDs with SWRCB, which includes the preparation of a Notice of Intent, risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction water balance calculations. The construction contractor is always required to maintain a copy of the SWPPP at the site and implement all construction BMPs identified in the SWPPP during construction activities. Prior to the commencement of any ground disturbance, the project applicant is required to provide proof of filing of the PRDs with SWRCB and the County. Categories of potential BMPs that would be implemented for development projects accommodated by the Specific Plan are described in Table 5.7-1.

Table 5.7-1 Construction BMPs

Category	Purpose	Examples
Erosion Controls and Wind Erosion Controls	• Use project scheduling and planning to reduce soil or vegetation disturbance (particularly during the rainy season) • Prevent or reduce erosion potential by diverting or controlling drainage • Prepare and stabilize disturbed soil areas	Scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, streambank stabilization, compost blankets, soil preparation/roughening, and non-vegetative stabilization
Sediment Controls	• Filter out soil particles that have been detached and transported in water	Silt fence, sediment basin, sediment trap, check dam, fiber rolls, gravel bag berm, street sweeping and vacuuming, sandbag barrier, straw bale barrier, storm drain inlet protection, manufactured linear sediment controls, compost socks and berms, and biofilter bags
Wind Erosion Controls	• Apply water or other dust palliatives to prevent or minimize dust nuisance	Dust control soil binders, chemical dust suppressants, covering stockpiles, permanent vegetation, mulching, watering, temporary gravel construction, synthetic covers, and minimization of disturbed area
Tracking Controls	• Minimize the tracking of soil offsite by vehicles	Stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash.
Non-Storm Water Management Controls	• Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment. • Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges.	Water conservation practices, temporary stream crossings, clear water diversions, illicit connection/discharge, potable and irrigation water management, and the proper management of the following operations: paving and grinding, dewatering, vehicle and equipment cleaning, fueling and maintenance, pile driving, concrete curing, concrete finishing, demolition adjacent to water, material over water, and temporary batch plants.
Waste Management and Controls (i.e., good housekeeping practices)	• Manage materials and wastes to avoid contamination of stormwater.	Stockpile management, spill prevention and control, solid waste management, hazardous waste management, contaminated soil management, concrete waste management, sanitary/septic waste management, liquid waste management, and management of material delivery storage and use.

Source: CASQA 2015.

Submittal of the PRDs and implementation of the SWPPP throughout the construction phase of individual development projects will address anticipated and expected pollutants of concern as a result of construction activities. Individual development projects would comply with all applicable state, regional and local water quality standards and waste discharge requirements. Therefore, water quality impacts associated with construction activities that would be realized under the Specific Plan would not to be significant.

Operation Phase

Once development projects pursuant to the Specific Plan have been constructed and are in operation, urban runoff could include a variety of contaminants that could impact water quality. Runoff from buildings and parking lots typically contain oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals), as well as fertilizers, herbicides, pesticides, and other pollutants. Precipitation at the beginning of the rainy season may result in an initial stormwater runoff (first flush) with high pollutant concentrations. Operational-related activities of the individual development projects would generate pollutants that could adversely affect water quality if effective measures are not used to keep pollutants out of and remove pollutants from urban runoff.

Stormwater generated in the Plan Area will be collected via surface flow into a master plan system of storm drain open channels, inlets and pipes throughout the Plan Area that will convey the stormwater into a large master plan retention basin (basin) that is designed to store 100 percent of the runoff from a 10-year, 10-day rainfall event, per the Kings County Improvement Standards. The basin will be located in the eastern portion of the Plan Area, just west of I-5 and within the Specialty Agriculture-designated area of the Specific Plan (see Figure 3-8, *Stormwater Management Plan*). The basin will occupy approximately six acres of the Plan Area.

Each individual development parcel will have the option to direct their drainage to the streets via surface flow or by installing an onsite storm drain system that will tie into the master storm drain system, depending on the individual constraints of the parcel and/or the proposed user. For example, an industrial user that would be constructing a building with depressed loading docks may not be able to surface drain to the streets due to the amount of fill that would be required to allow the property to surface drain. Instead of surface draining, they will have the ability to design an onsite collection system that will tie into the master plan storm drainage system in order to get their stormwater to the basin.

The phasing of the Specific Plan will control the amount of the basin volume and detention area that is required. The basin will not need to be built to its ultimate capacity in the initial phases of development. As new areas of the Jackson Ranch are developed, the basin will be expanded to meet the required stormwater volume. Furthermore, the CGP contains post-construction requirements for projects that are not covered by a Phase I or Phase II MS4 permit. The CGP requirements state that dischargers replicate the pre-project runoff amount up to the 85th percentile storm event, or the smallest storm event that generates runoff, whichever is larger. The CGP requirements emphasize runoff reduction through onsite storm water reuse, interception, evapotranspiration and infiltration through non-structural controls and conservation design measures (e.g., downspout disconnection, soil quality preservation, soil, interceptor trees).

However, to ensure that post-project runoff of development projects accommodated by the Specific Plan replicates pre-project runoff, Mitigation Measure HYD-1 is proposed as operation-related impacts of the Specific Plan are potentially significant.

Wastewater Treatment Plant

A wastewater collection and treatment system would be developed for the Plan Area (see Figure 3-9, *Wastewater Management Plan*) and would consist of a wastewater treatment facility (WWTF) that would provide primary and

secondary treatment. Grease interceptors (where necessary) and influent screeners will be installed as part of the wastewater collection system to intercept debris and fats, oils, and grease prior to entering the WWTF. The WWTF's treatment process will include primary and secondary septic tanks, flow equalization, recirculating media filter systems, denitrification, and sand filter dispersal systems. Wastewater will trickle down in unsaturated thin-film flow through the sand media in a time-dose mode and then percolate directly into the native soil under the filter. Since treated wastewater would involve disposal to land, the WWTP would require a Waste Discharge Requirements (WDR) permit pursuant to California Water Code Section 13260(a).

A ROWD was prepared for the WWTF and submitted to the Central Valley RWQCB pursuant to the provisions of California Water Code Section 13260(a) (NexGen 2020). The ROWD found that groundwater in the Plan Area ranges between 6 to 35 feet below ground surface (bgs) with the seasonally highest recorded level at 6 feet. No wells were identified within 500 feet of the Plan Area. Groundwater in the Tulare Lake Subbasin is not suitable for beneficial uses, as outlined in the Water Quality Control Plan for the Tulare Lake Basin, and the Central Valley RWQCB has determined in 2017 that the basin is no longer designated for municipal and agricultural beneficial uses in portions of the basin. Additionally, no ephemeral, perennial streams, or surface waters are near the Plan Area and any discharge of wastewater effluent will be far from any surface water bodies so there would be no potential degradation of surface waters.

The ROWD concluded that the level of water quality provided by the new treatment system and the design of the system would not adversely impact native soils and groundwater beneath the Plan Area. Additionally, the location of surface water bodies from the Plan Area are too far to be affected by discharges to the land (NexGen 2020).

Furthermore, the WWTF would provide several features that will minimize the potential for spills and the need for emergency response. These include but are not limited to a gravity flow collection system and spare parts and redundancy for the pumps that pump treated effluent to the dispersal area. The onsite treatment and disposal system will also be periodically inspected and maintained.

Therefore, impacts associated with discharge from the WWTF to land in the Plan Area would not be significant.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, water quality impacts associated with construction activities and waste discharge from the WWTF realized under the Specific Plan would not be significant. As also substantiated above, to ensure that post-project runoff replicates pre-project runoff, Mitigation Measure HYD-1 is proposed as operation-related impacts of the Specific Plan are potentially significant.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* in order to provide potable water to future uses of the Plan Area, an offsite water main would be installed within the County's

right-of-way along 25th Avenue. This roadway is fully paved and maintained by the County. The water main would stretch for approximately 4.2 miles from the Plan Area to the new Kettleman City Surface Water Treatment Plant (see Figure 3-6, *Proposed Offsite Water Main Route*) and would disrupt more than one acre of land. Therefore, the water main construction would require compliance with the CGP, which requires the preparation and implementation of a SWPPP. Furthermore, the operation phase of the proposed water main would not generate any pollutants and would have no impacts on water quality. In summary, no constriction or operational related impacts to water quality would occur as a result of the offsite water main improvements.

Impact 5.7-2: Development pursuant to the Specific Plan would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. [Thresholds HYD-2]

Impact Analysis. Following is a discussion of the potential impacts to groundwater supplies and recharge as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Construction Phase

Construction activities associated with development that would be accommodated by the Specific Plan would involve grading and excavation, which have the potential to intersect groundwater. The groundwater beneath the Plan Area is shallow with depths to groundwater between 6 to 35 feet bgs and a seasonally highest recorded level at 6 feet (NexGen 2020). If groundwater is encountered during excavation, dewatering would be required. If dewatering discharge is piped to an onsite infiltration basin during construction, the Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (Order No. 2003-0003-DWQ) would be required to be implemented. However, construction activities are temporary in nature, would subside once completed, and would not result in a substantial depletion of groundwater supplies that could result in a lowering of the groundwater table. Therefore, no impacts to groundwater supplies would occur during the construction phase of individual development projects.

Operation Phase

In order to provide potable water to future uses of the Plan Area, an offsite water main would be installed within the County's right-of-way along 25th Avenue. The water main would stretch for approximately 4.2 miles from the Plan Area to the new Kettleman City Surface Water Treatment Plant (see Figure 3-6, *Proposed Offsite Water Main Route*). Proposed development in the Plan Area would be serviced by the Kettleman City Community Services District (KCCSD). KCCDS water supplies consist of surface water from the State Water Project (SWP) and one local well (the Becky Pease Well) that is used if the SWP allotment of surface water is not sufficient to meet the needs of KCCSD customers. If needed, the Becky Pease Well would be used as a secondary source of water and currently has a maximum capacity of 250 gallons per minute.

Implementation of the Specific Plan would lead to an increased demand in water, and therefore might lead to an increase in groundwater pumping. A Water Supply Assessment (WSA) was prepared for the Specific Plan (Appendix H) to analyze the Specific Plan's impact on future water supply. The WSA substantiated that KCCSD has adequate supplies to serve all customers, including those of the Specific Plan, during normal, dry year, and multiple dry year demands through 2040, accounting for projected population increases and corresponding increases in water demand. Furthermore, the Plan Area is not in or near an active groundwater recharge site. Therefore, no impact to groundwater supplies or recharge during the operational phase would occur.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, no impact to groundwater supplies or recharge during the Specific Plan's construction and operational phases would occur.

Specific Plan – Offsite Water Infrastructure Improvements

As noted above, an offsite water main would be installed within the County's right-of-way along 25th Avenue in order to provide potable water to future uses of the Plan Area. The water main would stretch for approximately 4.2 miles from the Plan Area to the new Kettleman City Surface Water Treatment Plant (see Figure 3-6, *Proposed Offsite Water Main Route*). The offsite water infrastructure improvements would not require the use of groundwater supplies or interfere substantially with groundwater recharge. Therefore, no impact to groundwater supplies or recharge would occur.

Impact 5.7-3: Development pursuant to the Specific Plan would increase the amount of impervious surfaces in in the Plan Area, which in turn could substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion or siltation on- or off-site, potential flooding on- or offsite, runoff water that would exceed the capacity of storm drain systems, or substantial additional sources of polluted runoff. [Thresholds HYD-3 (i), (ii), and (iii)]

Impact Analysis. Following is a discussion of the potential impacts as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

As described in Impact 5.7-1, stormwater from individual development projects accommodated by the Specific Plan would be collected via surface flow into a master plan system of storm drain open channels, inlets, and pipes throughout the Plan Area. Stormwater would be conveyed into a r master plan retention basin (basin) that is designed to store 100 percent of the runoff from a 10-year, 10-day rainfall event, per the Kings County Improvement Standards (see Figure 3-8, *Stormwater Management Plan*). As individual parcels are developed during

future buildout of the Plan Area and direct their drainage to the onsite basin, the basin would be expanded to ensure adequate volume and detention area.

Implementation of the Specific Plan would alter the drainage patterns of the Plan Area with the development of the buildings, roadways, and associated site improvements. All development projects that disturb one acre or more of land would be required to comply with the CGP and implement measures to minimize the potential for erosion or siltation during construction, which would be ensured through preparation and implementation of a SWPPP. In addition, individual development projects are required to meet the requirements of the Kings County Improvement Standards.

Further, new development accommodated by the Specific Plan would trigger the CGP requirements for post-construction storm water management, which requires post-construction runoff amounts to not exceed pre-construction runoff amounts. However, to ensure that post-project stormwater volumes do not exceed pre-project development volumes, Mitigation Measure HYD-1 is proposed as operation-related impacts of the Specific Plan are potentially significant.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, Mitigation Measure HYD-1 is proposed as operation-related impacts of the Specific Plan are potentially significant.

Specific Plan – Offsite Water Infrastructure Improvements

As described above, an offsite water main would be installed within the County's right-of-way along 25th Avenue in order to provide potable water to future uses of the Plan Area. The water main would stretch for approximately 4.2 miles from the Plan Area to the new Kettleman City Surface Water Treatment Plant (see Figure 3-6, *Proposed Offsite Water Main Route*). Adherence to the CGP requirements, which includes preparation of a SWPPPP, would ensure that no impacts from the offsite water main improvements construction phase would occur. Additionally, development of the offsite water main improvements would not result in an increase in the amount of impervious surfaces nor in an increase in the rate or amount of surface runoff. Therefore, no impact would occur as a result of the water main improvements.

Impact 5.7-4: Development pursuant to the Specific Plan could obstruct or conflict with the implementation of a water quality control plan but would not obstruct or conflict with the implementation of a sustainable groundwater management plan. [Thresholds HYD-5]

Impact Analysis. Following is a discussion of the potential impacts as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Adherence to the CGP and preparation and implementation of a SWPPP as described in Impact 5.7-1 would ensure that surface and groundwater quality are not adversely impacted during the construction phase of individual development projects accommodated by the Specific Plan. For the operational phase, Mitigation Measure HYD-1 is proposed to reduce the potential operational water quality impacts that would occur as a result of development projects accommodated by the Specific Plan. With implementation of the mitigation measure, implementation of the Specific Plan would not obstruct or conflict with the implementation of the Basin Plan for the Tulare Lake Basin.

Upon development, the Plan Area will be connected to KCCSD's water supply. KCCSD uses groundwater as a backup supply and has sufficient supply to meet the projects water demand without adversely affecting the groundwater basin. Therefore, implementation of the Specific Plan would not obstruct or conflict with Kings County's SMP and no impacts to groundwater supplies or plans would occur.

Specific Plan – Phase One Buildout

The discussion above includes the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare. Therefore, impacts would be less than significant. The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, water quality impacts associated with construction activities realized under the Specific Plan would not significant. As also substantiated above, Mitigation Measure HYD-1 is proposed as operation-related water quality impacts of the Specific Plan are potentially significant. Furthermore, implementation of the Specific Plan would not obstruct or conflict with Kings County's SMP and no impacts to groundwater supplies or plans would occur.

Specific Plan – Offsite Water Infrastructure Improvements

In order to provide potable water to future uses of the Plan Area, an offsite water main would be installed within the County's right-of-way along 25th Avenue. The water main would stretch for approximately 4.2 miles from the Plan Area to the new Kettleman City Surface Water Treatment Plant (see Figure 3-6, *Proposed Offsite Water Main Route*). Construction of the water main would require compliance with the CGP, which would reduce impacts to water quality during the construction phase. Furthermore, the water main would have no impact on surface or groundwater quality during the operational phase. The water main would also have no impact on the sustainable management of the groundwater resource. Therefore, no impact would occur.

5.7.4 Cumulative Impacts

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County.

Hydrology and Drainage

Implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in a cumulative hydrology and drainage impacts in the County. As with the Specific Plan, other planned projects in Kings County could increase impervious areas and increase stormwater runoff rates. However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, as with the Specific Plan, other development projects in the County would be required to implement BMPs that include provisions for the capture and infiltration of runoff or the temporary detention of stormwater runoff so that post-development runoff discharges do not exceed pre-development runoff rates pursuant to the requirements of the CGP. Other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address hydrology and drainage impacts.

Furthermore, as demonstrated above, with mitigation, impacts to hydrology and drainage as a result of implementation of the Specific Plan would be reduced to a level of less than significant.

Water Quality

Implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in a cumulative water quality impacts in the County. As with the Specific Plan, other development projects in the County have the potential to generate pollutants during project construction and operation. However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, all construction projects that disturb one acre or more of land would be required to prepare and implement SWPPPs in order to obtain coverage under the statewide CGP. All projects in Kings County would also be required to prepare and implement BMPs that would be applied during project design and project operation to minimize water pollution from project operation. Other development projects in the County would also be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan.

Furthermore, as demonstrated above, with mitigation, impacts to water quality as a result of implementation of the Specific Plan would be reduced to a level of less than significant.

Conclusion

In consideration of the preceding, the Specific Plan's contribution to cumulative hydrology and water quality impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.7.5 Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to hydrology and water quality apply to the Specific Plan and are described in detail in Section 5.7.1.1, *Regulatory Setting*, above.

- Water Quality Control Plan for the Tulare Lake Basin
- California Water Code Section 13260(a)
- Statewide Construction General Permit (Order No. 2012-0006-DWQ)
- Kings County Improvement Standards

5.7.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impact would be less than significant: 5.7-2.

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

- **Impact 5.7-1** Development pursuant to the Specific Plan could violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
- **Impact 5.7-3** Development pursuant to the Specific Plan could substantially increase the rate or amount of surface runoff, which could exceed the capacity of storm drain systems and/or increase sources of polluted runoff.
- **Impact 5.7-4** Development pursuant to the Specific Plan could obstruct or conflict with the implementation of a water quality control plan.

5.7.7 Mitigation Measures

Impact 5.7-1

Specific Plan – Plan Area Buildout

HYD-1 A drainage plan for development pursuant to any phase of the Jackson Ranch Specific Plan (Specific Plan) shall be prepared on a project-by-project basis that specifies how runoff on the proposed development site will be managed in order to protect water quality and capture and retain runoff. The drainage plan of each development project shall include detailed runoff calculations to appropriately size the master plan retention basin (basin) and other required drainage improvements (e.g., storm drain open channels, inlets, and pipes) to meet the statewide Construction General Permit (GCP) requirements of the development area covered by the Specific Plan (Plan Area). Changes in volume and design capacity may be required to the basins as development occurs pursuant to the phases of the Specific Plan. The detention basin shall be designed and constructed to prevent localized on- or offsite flooding and prevent any negative water quality effects. The basin shall also be designed to capture surface

runoff and retain flows such that the rate and amount of surface runoff does not exceed existing flow rates and amounts, pursuant to the CGP. The drainage plan shall be designed in accordance with the Kings County Improvement Standards and shall be submitted to the Engineering Development Division of the Kings County Public Works Department prior to any ground disturbance for review and approval.

Specific Plan – Phase One Buildout

Mitigation Measure HYD-1 also applies here.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

Impact 5.7-3

Specific Plan – Plan Area Buildout

Mitigation Measure HYD-1 also applies here.

Specific Plan – Phase One Buildout

Mitigation Measure HYD-1 also applies here.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

Impact 5.7-4

Specific Plan – Phase One Buildout

Mitigation Measure HYD-1 also applies here.

Specific Plan – Phase One Buildout

Mitigation Measure HYD-1 also applies here.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

5.7.8 Level of Significance After Mitigation

With the implementation of Mitigation Measure HYD-1, potential hydrology and water quality impacts would be reduced to a level of less than significant.

5.7.9 References

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California Stormwater Quality Association (CASQA). 2015. Construction BMP Online Handbook. Subscription. https://www.casqa.org/resources/bmp-handbooks/construction.

Central Valley Regional Water Quality Control Board (Central Valley RWQCB). 2006, February. San Joaquin Valley Groundwater Basin. https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/archives/exist_cond_rpt/draft_existing_conditions_rpt/ch04_pt3.pdf.

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NexGen Engineering and Consulting (NexGen). 2020, April. Report of Waste Discharge for Jackson Ranch Commercial Development Wastewater Treatment Facility APN's 048-010-016, 048-010-018 and 048-020-030 Interstate 5 and Utica Ave Kings County, California.

Southwest Kings Groundwater Sustainability Agency (SWKGSA). 2019, August. Tulare Lake Subbasin Groundwater Sustainability Plan. http://www.swkgsa.org/assets/2019-0906-tulare-lake-subbasin-gsp-prelim-draft_for-upload.pdf.

5.8 LAND USE AND PLANNING

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Jackson Ranch Specific Plan (Specific Plan) to impact land uses in unincorporated Kings County—specifically, the area covered by the Specific Plan (Plan Area) and its surroundings. The analysis in this section is based in part on the proposed land use designations and development plan described in Chapter 3, *Project Description*, of this DEIR and in Chapter 3, *The Plan*, of the Specific Plan.

Land use impacts can be either direct or indirect. Direct impacts are those that result in land use incompatibilities, division of neighborhoods or communities, or interference with other land use plans, including habitat or wildlife conservation plans. This section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services, or increased traffic on roadways. Indirect impacts are addressed in other sections of this DEIR.

5.8.1 Environmental Setting

5.8.1.1 REGULATORY BACKGROUND

State, regional, and local laws, regulations, plans, or guidelines related to agricultural resources that are applicable to the Specific Plan are summarized below.

State

California Government Code

The California Government Code (Title 7, Division 1, Chapter 3, Article 8, Sections 65450–65457 [Specific Plans]) provides authority for a city/county to adopt a specific plan by ordinance (as a regulatory plan) or resolution (as a policy plan). When a specific plan is adopted by ordinance, the specific plan effectively replaces portions or all of the current zoning regulations for specified parcels and becomes an independent set of zoning regulations that provide specific direction to the type and intensity of uses permitted or define other types of design and permitting criteria.

Regional

Kings County Association of Governments

Kings County Association of Governments (KCAG) is a council of governments encompassing 1,396 square miles. Member agencies include the Kings County and the cities of Avenal, Corcoran, Hanford, and Lemoore. KCAG is the federally recognized metropolitan planning organization (MPO) for this region. As an MPO, KCAG serves as a pass-through agency for funding for local transportation projects. KCAG coordinates with other San Joaquin Valley MPOs on regional projects. KCAG is charged with preparing the Regional Transportation Plan (RTP) and guiding transportation investment and infrastructure in its region. California Senate Bill 375 (SB 375) further tasked MPOs to develop the Sustainable Communities Strategy as an integrated

component of its RTP to reduce greenhouse gas emissions from the transportation sector. KCAG coordinates with other San Joaquin Valley MPOs on regional projects.

Regional Transportation Plan/Sustainable Communities Strategy

In August 2018, KCAG adopted its 2018 Regional Transportation Plan/Sustainable Communities Strategy (2018 RTP/SCS), which covers the period from 2018 to 2042. The purpose of the 2018 RTP/SCS is to integrate transportation, land use, and housing in the planning process. The 2018 RTP/SCS provides the foundation for transportation decisions by local, regional, and state officials; documents the region's mobility needs and issues; identifies and attempts to resolve regional issues and provide policy and direction for local transportation plans; documents the region's goals, policies, and objectives for meeting current and future transportation mobility needs; sets forth an action plan to address transportation issues and needs consistent with regional and state policies; identifies transportation improvements in sufficient detail to aid in the development of the State Transportation Improvement Program and to be useful in making decisions related to the development and growth of the region; identifies those agencies responsible for implementing action plans; and documents the region's financial resources needed to meet mobility needs.

Furthermore, Chapter 12, Sustainable Communities Strategy, of the 2018 RTP/SCS addresses SB 375 to show how the integration of land use and transportation planning can lead to lower emissions of greenhouse gases (GHG) from passenger vehicles and light duty trucks. SB 375 reinforces linkage between the Regional Housing Need Allocation and SCS process to better integrate housing, land use, and transportation planning. The SCS is a regional growth strategy that provides the basis for the integration of the land use decisions made by KCAG's member agencies and the transportation investments in the region with a goal of reducing the GHG emissions form cars and light trucks in the region; the SCS must be based on "current planning assumptions."

Local

Kings County General Plan

The current Kings County General Plan was adopted on January 26, 2010. The General Plan's overarching priorities are to "protect prime agricultural land, direct urban growth to existing cities and community districts, and increase economic and community sustainability." (p.I-1). The General Plan land use designations and policies aim to encourage a compact and community-centered development to lower public service costs, use land more efficiently, and discourage premature conversion of farmland to other uses. The General Plan Land Use Element designates the general distribution, location and intensity of land uses and establishes policies to guide and direct future land use decisions and development.

Land Use Designations

The Kings County General Plan designates all parts of the Plan Area as General Agriculture-40 Acre. A discussion of the existing General Plan land use designation for the Plan Area is provided in Section 5.8.1.2, *Existing Conditions*, below. The Land Use Element defines policies according to five categories of built environment: (1) Natural Lands, (2) Agriculture Open Space, (3) Rural Interface, (4) Community Districts, and (5) Urban Fringe. The Plan Area's land use designation falls under the Agriculture Open Space category.

Land Use Element Goals, Objectives, and Policies

The Land Use Element outlines the following goals that would relate to the Specific Plan. Each applicable goal and its corresponding policies are discussed in Table 5.8-2, *Consistency with the County's General Plan Land Use Element*, below.

Category: Agriculture Open Space

LU Goal B1: Protect agricultural lands throughout the County, and in particular along the edges of community districts and Urban Fringe by maintaining large parcel sizes and preventing the premature development of incompatible urban uses

LU Goal B2: Agricultural production continues to be supported and enhanced in areas designated for agriculture, while conflicts between agriculture and non-agricultural uses are minimized.

LU Goal B3: Allow agricultural support services within areas designated General Agriculture.

LU Goal B4: Housing within agricultural designated areas are primarily intended for the purposes of those engaged in farming, and for seasonal farm employee housing.

LU Goal B5: Agricultural conservation efforts that serve to protect the County's agricultural economy do not hinder the ability of cities and community districts to accommodate well planned orderly growth, and do not foster discontinuous patterns of Urban Fringe or Community District development that lead to urban sprawl.

LU Goal B6: Agricultural areas provide secondary benefits by serving as essential public safety buffers for strategic military installations and floodwater drainage, and serve to protect the wellbeing of residents and business investments which are critical to the sustainability of the County.

LU Goal B7: Community benefiting non-agricultural uses remain compatible within the County's Agriculture Open Space area, and are supported for their continued operation and existence.

Category: Rural Interface

LU Goal C1: Rural pockets of urban uses in the agricultural areas remain limited in geographic area to the extent of preexisting residential, commercial and industrial land uses to prevent conflicts between agricultural and non-agricultural interests.

New Community Development

The Kings County General Plan Land Use Element provides an overview of community plans, specific plans, and new communities within Kings County. Community plans and specific plans provide additional regulations, requirements, or standards that are specific to a particular area or community. The Land Use Element states that specific plans may be used to establish new communities. To guide the establishment of specific plans, the County developed a "New Community Application and Processing Procedure" (NCDP) that was adopted by

the Board of Supervisors in October 2007. The NCDP establishes criteria for evaluating new community proposals and requires the submittal of a detailed specific plan and also implemented a new community development management system. A "New Community Application" is defined as: [A]ny application for a General Plan Amendment or rezoning of rural lands to urban uses in excess of 40 acres outside of any Developed Area's Sphere of Influence. (page 1).

Kings County Development Code

The Kings County Development Code regulates the uses of land and structures in the unincorporated areas of Kings County by establishing zoning designations and development requirements and procedures. The Kings County Development Code designates all parts of the Plan Area as AG-40 (General Agriculture- 40 District)— the Plan Area also has a Dairy Development Overlay Zone. A discussion of the existing zoning designation in the Plan Area is provided in Section 5.8.1.2, *Existing Conditions*, below.

5.8.1.2 EXISTING CONDITIONS

The Plan Area encompasses approximately 415 acres across four parcels. The Plan Area is currently developed with active and farrow agriculture land or rangeland. The agricultural production consists mainly of irrigated crops such as almonds, pistachios, and stone fruits (apricots and plums); dry land grazing also occurs in the Plan Area. The Plan Area has historically been used for farming. The Plan Area is relatively flat with onsite elevations ranging between 240 feet to 298 feet above mean sea level from east to west, respectively.

The Plan Area is located at the southwest corner of Utica Avenue and Interstate 5 (I-5) at freeway exit 305. Utica Avenue runs along the Plan Area's northern boundary; I-5 runs along its eastern boundary; and 25th Avenue bisects the Plan Area into eastern and western sides.

Existing General Plan Land Use Designations

The Kings County General Plan designates all parts of the Plan Area as General Agriculture-40 Acre. This designation applies to rural areas of the County south of Kansas Avenue, excluding the Urban Fringe areas of Corcoran, the communities of Kettleman City and Stratford, and high slope areas of the Coast Ranges. The General Agriculture designation includes large corporate farms and areas of the valley floor that includes extensive and intensive agricultural uses. This designation allows intensive agricultural uses that by their nature may be incompatible with urban uses. The General Plan Land Use Element states that much of the land within the General Agriculture-40 Acre land use designation is subject to flood hazard risk and "should remain devoted to agriculture use to reduce the potential for future conflicts" (page LU-13). The General Agriculture (and Limited Agriculture) designation allows appropriate locations for agricultural support businesses.

Existing Zoning Designations

The Kings County Development Code designates all parts of the Plan Area as AG-40 (General Agriculture- 40 District)—the Plan Area also has a Dairy Development Overlay Zone (DDOZ). The AG-40 zoning district applies to rural area of the County south of Kansas Avenue, including the valley floor that are generally characterized by extensive and intensive agricultural uses, and the southwestern mountainous part of the County that are generally characterized by extensive and intensive agricultural and grazing uses of land. The

minimum parcel size within this zone is 40 acres. Section 405 of the Development Code describes this Land Use designation as:

> This area should be reserved for commercial agricultural uses because of it high quality soil, existing or potential irrigation works, exclusive agricultural character of the area, or the need to reserve areas for intensive agricultural uses, which by their nature may be incompatible with nonagricultural or quasi-agricultural uses, as well as to reduce other potential conflicts which may be identified, including but not limited to, flooding and wildfires, and to preserve land best suited for agriculture uses from the encroachment of incompatible uses and the service demands they create.

The AG-40 zoning district allows for a variety of agricultural, residential, energy, public utilities, and miscellaneous uses by-right or with a site plan review, conditional use permit, or temporary land use permit.

As established in the General Plan Dairy Element, the DDOZ designates those portions of the County where the majority of the dairies in the County exist and where new dairies may be located. The DDOZ allows for the development of new dairies and the expansion of existing dairies in accordance with the specific requirements and standards contained in the General Plan Dairy Element and County's Application Guidelines for New and Expanding Dairy Permits, and as permitted by the underlying zoning designation.

5.8.2 Thresholds of Significance

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

LU-1 Physically divide an established community.

LU-2 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following threshold would be less than significant:

- Threshold LU-1

This impact will not be addressed in the following analysis.

5.8.3 Environmental Impacts

5.8.3.1 IMPACT ANALYSIS

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

Impact 5.8-1: Implementation of the Specific Plan would not conflict with applicable plans adopted for the 3purpose of avoiding or mitigating an environmental effect. [Threshold LU-2]

Impact Analysis. The Specific Plan is intended to shape development within the Plan Area through 2040 in accordance with the vision and guiding principles of the Specific Plan. The proposed land use plan for the Plan Area is shown in Figure 3-4, *Specific Plan Land Use Plan*. As shown in the figure, the Specific Plan provides for three primary land use designations, and one overlay designation: Innovation Center (IC-JR), Commercial Thoroughfare (CT-JR), Specialty Agriculture (A-JR), and Specialty Agriculture with Air Strip Overlay (A-JR).

As shown in Table 3-1, *Jackson Ranch Specific Plan Land Use Statistical Summary*, just under 2.4 million square feet of commercial space is planned for Jackson Ranch, with the majority of it slated for the area designated as Innovation Center. This designation allows for a range of uses including light industrial, research and development, medical offices, hospitals, office, hospitality, retail, and entertainment. The area encompassing the Commercial Thoroughfare land use designation is envisioned as a sophisticated transportation plaza, delivering food, lodging, amenities, and entertainment to both professional and leisure travelers along I-5. The Specific Plan intends to create a fully amenitized rest stop and commercial hub along I-5 that would serve travelers, encourage new employment across a variety of industries and attract a range of complementary commercial uses.

In order to implement the Specific Plan, a General Plan Amendment to change the General Plan land use designation of the Plan Area from General Agriculture-40 Acre (current General Plan land use designation) to Jackson Ranch Specific Plan is required. Under the Specific Plan, approximately 141 acres, or 34 percent of the Plan Area, would be designates as Innovation Center and Commercial Thoroughfare, which would allow a range of commercial, retail, light industrial, research and development, office, and hospitality uses. Also, approximately 268 acres, or 65 percent of the Plan Area, would be designated as Specialty Agriculture. It is anticipated that existing active agriculture will continue in the Specialty Agriculture-designated areas of the Plan Area during and after the development of Jackson Ranch.

Additionally, implementation of the Specific Plan would require an amendment to the Kings County Development Code and Zoning District Map. Specifically, the Development Code Amendment is needed to add the Jackson Ranch Specific Plan by reference and the Zoning District Map Amendment is needed to change the zoning district from AG-40 to Jackson Ranch Specific Plan. The existing zoning district of the Plan Area would also be replaced with the new Specific Plan land use designations. Additionally, the Development Code Amendment would state that the regulating code contained in the Specific Plan would serve as the regulatory plan (zoning, development, and design standards and guidelines) for all development projects and improvements in the Plan Area.

Pursuant to the provisions of the California Government Code (Title 7, Division 1, Chapter 3, Article 8, Sections 65450–65457 [Specific Plans]), the Specific Plan would be adopted by the Kings County Board of Supervisors as ordinance and function as the regulatory plan that serves as the implementing zoning for the Plan Area, thereby, ensuring the orderly and systematic implementation of the Kings County General Plan, as well as the orderly and systematic development of the Plan Area. The Specific Plan would act as a bridge between the Kings County General Plan and development that would occur throughout the Plan Area.

The following is an analysis of the Specific Plan's consistency with applicable regional and laws, regulations, plans, and guidelines adopted for the purpose of avoiding or mitigating an environmental effect. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

KCAG 2018 Regional Transportation Plan/Sustainable Communities Strategy

A comparison of the Specific Plan with the broad goals and policies of KCAG's 2018 RTP/SCS is provided in Table 5.8-1. The analysis in this table concludes that the Specific Plan would be consistent with the 2018 RTP/SCS. Therefore, implementation of the Specific Plan would not result in significant land use impacts related to the 2018 RTP/SCS.

Table 5.8-1 Consistency with KCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy

RTP/SCS Goals, Policies, and Performance Measures	Project Compliance
Regional Transportation Plan Goals and Policies	
Overall Goal: To develop a transportation system that encourages and promotes the safe and efficient development, management, and operation of surface transportation systems to serve the mobility needs of people and freight (including meeting the Americans with Disabilities Act requirements, accessible pedestrian walkways, and bicycle transportation facilities) and foster economic growth and development, while minimizing transportation-related fuel consumption and air pollution.	***Consistent.*** The Specific Plan is not a transportation project; however, the Specific Plan programs development that would serve travelers along I-5 and would add a network of local streets in the Plan Area that would connect to existing streets (Utica Avenue and 25th Avenue). Local streets would provide safe and efficient travel onsite what would incorporate amenities for pedestrians, including paths and landscaping. Pedestrian improvements developed as part of the Specific Plan would meet ADA requirements. Future development as part of the Specific Plan, especially within the Commercial Thoroughfare portion of, would provide a safe stop for I-5 travelers to rest and refuel. The Specific Plan's transportation system, while not specifically developed to minimize fuel consumption, would be designed and implemented to foster economic growth and development in the County. Additionally, as shown in Figure 3-3, *Aerial Photograph*, the Plan Area and its surroundings are developed with agricultural uses. Aside from I-5 and other local roads in the area (which serve vehicles only), there are no alternative modes of transportation (e.g., pedestrian, bicycle, public transit) on or within miles of the Plan Area. Aside from the pedestrian improvements that would occur throughout the Plan Area, no other improvements for alternative modes of transportation would be developed under the Specific Plan. The Specific Plan intends to create a fully amenitized rest stop and commercial hub along I-5 that would serve travelers, encourage new employment across a variety of industries and attract a range of complementary commercial uses.
Program Policy: Continue making full use of KCAG's decision-making forums, including their regular meetings, to examine alternative solutions to transportation needs and problems.	***Not Applicable.*** This policy is directed towards KCAG. The Specific Plan is not a transportation project but would support the needs of travelers along I-5.

5. Environmental Analysis
LAND USE AND PLANNING

Table 5.8-1 Consistency with KCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy

RTP/SCS Goals, Policies, and Performance Measures	Project Compliance
Environmental Policy: The environmental consequences of transportation projects shall be taken into account. Of particular importance are impacts relating to air quality, energy use, noise, and changes in land use.	***Consistent.*** While the Specific Plan is not a transportation project, this DEIR examines impacts to air quality, energy, noise, and land use as a result of development that would be accommodated by the Specific Plan, including the anticipated on-/and offsite transportation projects. The Specific Plan's impacts to air quality and greenhouse gas emissions are analyzed in Sections 5.2 and 5.6, respectively. The Specific Plan's impact to energy was scoped out in the Initial Study (included in Appendix A). The Specific Plan's impacts related to noise are analyzed in Chapter 5.9; and the impacts related to changes in land use are discussed in this section.
Public Participation Policy: Transportation facilities and services should meet the needs of all segments of the population. KCAG employs an environmental justice approach to its public participation policy and procedures and welcomes community comment and guidance in its transportation planning and decision making process.	***Consistent.*** While the Specific Plan does not involve a transportation facilities project, does guide development that would serve travelers along the I-5. Also, the California Environmental Quality Act (CEQA) process incorporates public review requirements, which are in place to ensure public noticing and provide for participation. Through the Specific Plan's planning and environmental review process, the County would ensure that adequate public participation is undertaken. For example, the Specific Plan and Initial Study/Notice of preparation have been presented at a community meeting and the Initial Study and DEIR have been made available for public review pursuant to the CEQA Guidelines.
Highway System Goal: Maintain, upgrade and complete a regional system of roadways which is convenient, safe, and efficient, and which serves the needs of all users.	***Consistent.*** While the Specific Plan is not a transportation nor highway system project, it would incorporate roadway improvements to Utica Avenue and 25th Avenue to accommodate additional traffic to the Plan Area. The Specific Plan guides development that would serve travelers along I-5 and aims to provide safe and efficient commercial, rest, and refueling opportunities conveniently located off the Utica Avenue freeway on-/off-ramps.
Highway System Policy: Maintenance shall be continuous to keep the regional highway system from falling further into disrepair. The system shall be upgraded and completed as revenues allow.	***Not Applicable.*** This policy is directed towards Caltrans. The Specific Plan is not a transportation project but would support the needs of travelers along I-5.
Highway Safety Policy: Improve routes of regional significance to promote the safe operation of vehicular traffic, especially during high accident probability times such as times of heavy winter fog, night, etc. **Goods Movement Policy:** Support the efforts of the trucking and rail industries to transport commodities safely and efficiently.	***Not Applicable.*** The Specific Plan would incorporate major roadway improvements to Utica Avenue and 25th Avenue to accommodate additional traffic to and from the Plan Area; both of these roadways serve as important roadways in Kings County. Also, the Specific Plan would support safe travel along I-5 by providing a convenient rest stop that would serve all drivers during all driving conditions, including fog and at night. The Commercial Thoroughfare portion of the Plan Area would incorporate a 10-acre truck stop and would allow services for travelers including lodging, service stations, and restaurants. The uses amenities proposed in the Commercial Thoroughfare designation would support (and improve) the safe and efficient transportation of commodities of the trucking industries in the region and beyond.
Public Transit Policy: Provide public transit services for those needs defined as "Unmet Transit Needs" which are "Reasonable to Meet".	***Not Applicable.*** This policy is directed towards the County's public transit service to ensure transit services for unmet transit needs that are reasonable to meet. Additionally, as shown in Figure 3-3, *Aerial Photograph*, the Plan Area and its surroundings are developed with agricultural uses. Aside from I-5 and other local roads in the area (which serve vehicles only), there are no public transit improvements or facilities (but or rail) on or within miles of the Plan Area. Also, no such improvement or facilities would be developed under the Specific Plan.

Table 5.8-1 Consistency with KCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy

RTP/SCS Goals, Policies, and Performance Measures	Project Compliance
Intercity Rail and Bus Policy: Preserve an effective and convenient intercity public transportation system of regularly scheduled bus and rail services.	***Not Applicable.*** See response above under "Public Transit Policy".
Aviation Goal: A fully functional and integrated air transportation and airport system that is complementary to the regional transportation system. **Aviation Policy A:** Work with local agencies to ensure compatible land uses around existing airports to reduce noise and structure conflicts. **Aviation Policy B:** Maintain alternative modes of transportation to and from the Hanford Municipal Airport. **Aviation Policy C:** Promote the development and maximum utilization of public and private airports to provide for county and regional general air transportation needs.	***Consistent.*** As shown in Figure 3-4, *Specific Plan Land Use Plan*, approximately 56 of the 268 acres to be designated Specialty Agriculture would include an Air Strip Overlay, which would allow for the development of a potential future private air strip in the Plan Area. Pursuant to the Specific Plan, development of an air strip is a potential future use that is permitted in the Specialty Agriculture land use designation only via County issuance of a Conditional Use Permit. Development of an air strip is not a part of the Specific Plan's project scope at this time, and therefore, is not analyzed in this DEIR. If the Air Strip Overlay is implemented in the future, additional environmental review and approval from local and federal agencies pursuant to CEQA will be required to address the potential environmental impacts of developing an air strip
Active Transportation Policy: Improve the existing transportation system to better accommodate bicycles and pedestrians as well as automobiles and trucks; improve public awareness of and competence in bicycle use; and improve public and private sector responsiveness to bicycle and pedestrian transportation.	***Consistent.*** Implementation of the Specific Plan would include development of a local street network within the Plan Area and improvements to existing rights-of-way of Utica Avenue and 25th Avenue. The roadway improvements would improve the existing transportation system in and around the Plan Area to accommodate automobiles and trucks. The local street network and improvements would incorporate walking/ paths, landscaping, and directional signage to better accommodate vehicles and pedestrians and to facilitate access to all major destinations within the Plan Area. Aside from I-5 and other local roads in the area (which serve vehicles only), there are no alternative modes of transportation (e.g., pedestrian, bicycle, public transit) on or within miles of the Plan Area. Aside from the pedestrian improvements that would occur throughout the Plan Area, no other improvements for alternative modes of transportation would be developed under the Specific Plan.
Transportation Systems Management (TSM) Policy A: Maintain and improve the quality of the existing transportation system. **TSM Policy B:** Increase the efficiency of the existing transportation system. **TSM Policy C:** Minimize the costs to improve the quality and efficiency of the existing transportation system.	***Consistent.*** While the Specific Plan is not a transportation project, implementation of the Specific Plan would support the efficiency of I-5 by providing an opportunity for drivers and travelers to exit the freeway if needed or desired to rest, eat or refuel, which improves safety, comfort, and convenience for I-5 travelers. Aside from roadway improvements for vehicles and trucks, the Specific Plan provides for the development of pedestrian pathways along all roadways of the Plan Area, including major roads like Utica Avenue and 25th Avenue.
TSM Policy D: Minimize the undesirable environmental impacts of existing transportation facilities and services. **TSM Policy E:** Promote desirable and minimize undesirable social and economic impacts of the existing transportation system.	***Consistent.*** As substantiated in the topical sections of this DEIR and in the Initial Study (included in Appendix A), the Specific Plan's transportation improvements and facilities would not result in significant impacts to the environment. Additionally, the Specific Plan would allow for the development of alternative energy uses, such as electric vehicle recharge stations, which could improve air quality and reduce energy use. Social and economic impacts of project are not required to be analyzed pursuant to CEQA and are therefore not discussed in this DEIR.

Table 5.8-1 Consistency with KCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy

RTP/SCS Goals, Policies, and Performance Measures	Project Compliance
Sustainable Communities Strategy Performance Measures	
Preservation of Agricultural and Resource Lands: The agricultural component of Kings County is part of America's best producing farmland and part of the culture of the San Joaquin Valley. It is the desire and the goal of every decision making body to preserve it.	***Consistent***. The Plan Area is currently designated as agricultural land. The Specific Plan would designate approximately 268 acres of the 415 acres of the Plan Area as Specialty Agriculture (or 65 percent of the Plan Area). The Specialty Agriculture designation would allow for continued agriculture and supporting uses that would support agriculture in the area. Additionally, the Specialty Agriculture designation would provide a transition between the agriculture uses to the south of the Plan Area and the commercial uses on the northern side of the Plan Area.
Environmental, Economic Opportunities, and Equity in Access: The basic components of sustainability.	***Consistent.*** The Specific Plan would allow for the incorporation of sustainability and renewable energy improvements and facilities, including solar farms and electric vehicle charging stations. Additionally, development under the Specific Plan would be required to comply with the California Building Code, which provides for energy efficiency requirements and sustainability measures. The Specific Plan would further provide space for new businesses and services in the Plan Area, which increases job opportunities and services in the KCAG region and contributes to economic opportunities and equity in the region.
Reduce Emissions: Meet not only the GHG reduction targets, but also the air quality improvement requirements of the state and federal air quality acts.	***Consistent.*** As discussed in Chapters 5.2, *Air Quality*, and 5.6, *Greenhouse Gas Emissions*, the Specific Plan would not result in significant impacts to air quality and greenhouse gas emissions, respectively. Development under the Specific Plan would comply with all applicable state and federal air quality regulations. As also noted above, the Specific Plan would allow for the incorporation of sustainability and renewable energy improvements and facilities, including solar farms and electric vehicle charging stations. These improvements and facilities in turn would help reduce GHG emissions.
Improve Public Health: Increased active transportation options, improved community health outcomes through a decrease in obesity and diabetes and an improvement in cardiovascular health.	***Consistent.*** While not directly applicable to the Specific Plan, implementation of the Specific Plan would support this performance measure. Within the Plan Area, the Specific Plan would provide a street network that would include pedestrian walkways and landscaping. Additionally, the Specific Plan allows for a number of active recreational activities, which supports community health outcomes, including archery ranges, golf courses, gymnasiums, health and fitness clubs, plazas and parks, paint ball, and private sport complexes. The Specific Plan further allows for medical offices, hospitals, extended care facilities, outpatient clinics, and urgent care facilities, which would further support public health.
System Preservation: Maintain system pavement and bridges; improve system reliability, mobility, and safety. Implement appropriate elements of "fix-it-first" approach.	***Consistent.*** While not directly applicable to the Specific Plan, implementation of the Specific Plan would support this performance measure. For example, implementation of the Specific Plan would include improve improvements to the existing rights-of-way of Utica Avenue and 25th Avenue, as described in detail in Chapter 3, *Project Description*. Additionally, the Specific Plan would provide a rest stop along I-5, which would provide a safe and convenient location for drivers to exit the freeway to rest, eat or refuel, which improves safety, comfort, and convenience for I-5 travelers.
Economic Development: Consider jobs/housing balance and proximity, commercial corridors and clusters, commute patterns, transit corridors, and highway access improvements	***Consistent.*** The Specific Plan proposes a commercial hub and rest stop, which would provide space for new businesses to attract travelers and companies to the area. The Specific Plan would allow for a variety of commercial (including business and professional services, hospitality/entertainment, medical and personal services, and retail), light industrial, agricultural, and recreational and cultural uses along a highway corridor.

Table 5.8-1 Consistency with KCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy

RTP/SCS Goals, Policies, and Performance Measures	Project Compliance
	Additionally, the Specialty Agriculture designation would provide for continued agriculture uses within the Plan Area by providing space for supportive uses, such as farmers markets and farm-based tourism. The Specific Plan would support job diversity and would provide a commercial hub and rest stop with full amenities adjacent to I-5. Overall, implementation of the Specific Plan would support increased economic development in the County and contribute to and improve the County's jobs/housing balance through the provision of a wide array of jobs that are lacking in the County. Furthermore, implementation of the Specific Plan would allow for the provision of highway access improvements at/near the I-5/Utica Avenue off-ramp (which forms the northeast Plan Area boundary) and major improvements to Utica Avenue, which provides direct access to I-5.

Source: KCAG 2018.

Kings County General Plan

In accordance with the holding in Sierra Club v. County of Napa, 121 Cal. App.4th 1490 (2004), "[a] project is consistent with a county's general plan (and any specific plan adopted to further the objectives of the general plan)' 'if, considering all its aspects, it will further the objectives and policies of the general plan and not obstruct their attainment.' [Endangered Habitats League, Inc. v. County of Orange (2005) 131 Cal. App.4th 77, 782.] A given project need not be in perfect conformity with each and every general plan policy. To be consistent, a [project] must be 'compatible with' the objectives, policies, general land uses and programs specified in the general plan."

Consistent with the holding in Sierra Club v. County of Napa, Table 5.8-2 provides an analysis as to why the Specific Plan is consistent (i.e., "compatible") or inconsistent with the Kings County General Plan Land Use Element, and how it would help implement and further various goals, objectives and policies of this element. The Specific Plan's consistency with other elements (e.g., circulation, housing, noise, air quality) of the Kings County General Plan is contained in the analysis provided in the respective topical sections of this DEIR. The analysis in Table 5.8-2 concludes that the Specific Plan would be consistent with the Kings County General Plan. Therefore, implementation of the Specific Plan would not result in significant land use impacts related to the Kings County General Plan.

Furthermore, future development projects that would be accommodated by the Specific Plan would be subject to the County's development review process upon a formal request for a development permit. The County's development review process would include verification of land use compatibility compliance in accordance with the development standards of the Specific Plan and the Kings County's Development Code. Additionally, the Specific Plan provides a list of allowable uses that are customized for the Plan Area, thereby minimizing the exposure of future workers, visitors, and customers to potential impacts.

Table 5.8-2 Consistency with the Kings County General Plan Land Use Element

Relevant Goals, Objectives, and Policies	Project Compliance
LU Goal B1: Protect agricultural lands throughout the County, and in particular along the edges of community districts and Urban Fringe by maintaining large parcel sizes and preventing the premature development of incompatible urban uses.	
LU Objective B1.1: Preserve the integrity of the County's agricultural land resources through agricultural land use designations and other long term preservation policies.	***Consistent.*** The Specific Plan would designate approximately 268 acres of the 415-acre Plan Area as Specialty Agriculture (or 62 percent of the Plan Area) (see Figure 3-4, *Specific Plan Land Use Plan*), which provides for a range of agricultural uses and uses that would support existing agriculture production. It is anticipated that existing active agriculture will continue in the Specialty Agriculture-designated areas of the Plan Area during and after the development of Jackson Ranch. Additionally, the Specialty Agriculture portion of the Plan Area would provide a transition between the agriculture uses to the south of the Plan Area and the commercial uses on the northern side of the Plan Area. For more details on existing and proposed agricultural resources of the Plan Area and the Specific Plan's potential impact to such resources refer to the analysis in Section 5.1, *Agricultural Resources*.
LU Policy B1.1.1: Designate all agricultural and grazing land outside of planned urban areas as Limited Agriculture, General Agriculture, Exclusive Agriculture, or Natural Resource Conservation.	***Consistent.*** The Plan Area is located outside of an urban area and is currently designated General Agricultre-40Acre. In order to implement the Specific Plan, a General Plan Amendment to change the General Plan land use designation of the Plan Area from General Agriculture-40 Acre (current General Plan land use designation) to Jackson Ranch Specific Plan is required. Under the Specific Plan, approximately 268 acres, or 65 percent of the 415-acre Plan Area, is proposed to be changed from General Agriculture-40 Acre to Specialty Agriculture. Development of the non-agricultural-designated areas of the Specific Plan would make those portions of the Plan Area more consistent with the Rural Interface and Community District General Plan land use categories.
LU Policy B1.1.2: Continue to use Williamson Act and Farmland Security Zone contracts on all priority agricultural lands outside the Primary Sphere of Influence of City and Community District boundaries as defined by LAFCO, so long as State "Open Space Subvention Act" funds remain available.	***Consistent.*** The Plan Area is located outside of a primary sphere of influence and a community district boundary. However, as stated in Section 5.1, *Agricultural Resources*, the Plan Area is not currently under Williamson Act or Farmland Security Zone contracts.
LU Policy B1.1.4: Pursue development of alternative programs for the long term preservation of prioritized agricultural land within the County to supplement existing programs, and ready for the potential phase out of Williamson Act and Farmland Security Zone contracts resulting from State elimination of subvention funding.	***Consistent.*** See responses to LU Goal B1.1 and LU Policy B1.1.,2, above.
LU Objective B1.2: Maintain large parcel sizes of agricultural designated land within Urban Fringe areas and around Community Districts to retain viable agricultural production until such time as land is planned and ready for conversion to other uses. **LU Policy B1.2.1:** Continue to designate agricultural land within the Urban Fringe areas as Limited Agriculture to maintain larger parcel sizes that can accommodate more efficient future urban growth expansion and annexation by cities. **LU Policy B1.2.2:** Maintain the Limited Agriculture designation around community districts until substantial build out of a community district has occurred according to an adopted community plan, and	***Consistent.*** The intent of the Limited Agriculture designation is for use around cities and community districts to serve as a transitional buffer between intensive agriculture uses and urban uses. The Limited Agriculture designation allows for less intensive agriculture practices and operations that are considered more compatible with urban uses (Kings County 2010). The Specific Plan would preserve approximately 268 acres of the 415-acre Plan Area as Specialty Agriculture. The Specialty Agriculture designation would require a minimum lot size of 10 acres, which is consistent with the requirements for Limited Agriculture. The Specialty Agriculture designation would provide a transition between the Commercial Thoroughfare and Innovation

Table 5.8-2 Consistency with the Kings County General Plan Land Use Element

Relevant Goals, Objectives, and Policies	Project Compliance
consideration of new locations for urban uses is necessary to accommodate additional population growth.	Center on the northern portion (near Utica Avenue) to the agricultural uses to the south of the Plan Area. The Specific Plan would maintain the majority of the viable agriculture land and agriculture supporting uses on site while providing new spaces for services and businesses. Additionally, the Specific Plan would establish a new community and would be required to comply with the requirements and procedures outlined in "New Community Application and Processing Procedure."
LU Policy B1.2.3: Land divisions involving Limited Agriculture designated land shall not result in the creation of a parcel(s) less than ten acres in size, or eleven acres in size when under a Williamson Act or Farmland Security Zone Contract. If land is classified as non-prime, the minimum shall be 41 acres except as provided in LU Policies B4.3.1, B4.3.2, and B4.3.3.	***Consistent.*** See responses to LU Objective B1.2 and LU Policy B1.1.2, above.
LU Goal B2: Agricultural production continues to be supported and enhanced in areas designated for agriculture, while conflicts between agriculture and non-agricultural uses are minimized.	
LU Objective B2.1: Recognize agriculture as the highest and best use of agricultural designated land, and preserve the right of farmers and agricultural operations to continue customary and usual agricultural practices, and operate in the most efficient manner possible. **LU Policy B2.1.1:** The primary use of land designated Limited Agriculture, General Agriculture, and Exclusive Agriculture shall remain devoted to agricultural uses and related support services.	***Consistent.*** As noted above, implementation of the Specific Plan would preserve approximately 268 acres of the Plan Area (or approximately 65 percent) as Specialty Agriculture, which would support existing agricultural uses within the region and support the commercial and business uses developed under the Specific Plan. The Specialty Agriculture designation would allow for a variety of agriculture uses (including, but not limited to, agricultural operations raising crops, agricultural service establishments, specialty stores, animal keeping, and farm equipment repair) and related support services (such as farmers markets and residential uses).
LU Policy B2.1.2: Parcels created in agricultural designated areas shall comply with the minimum parcel size requirement for the land use designation, except as provided in LU Goal B4 and subsequent objectives and policies.	***Consistent.*** Specialty Agriculture land use designation that would be created under the Specific Plan would require a minimum parcel size of 10 acres. All future development under the Specific Plan would be required to the comply with the Specific Plan.
LU Policy B2.1.3: Maintain implementation of the County's "Right to Farm Ordinance" adopted in 1996 to continue placing land owners on notice that they live within an agricultural County and may be subject to agriculture related inconveniences or discomforts.	***Consistent.*** Current and future landowners within the Plan Area would be given proper notice of the County's "Right to Farm Ordinance."
LU Objective B2.2: Minimize and reduce the potential for conflicts between agriculture and non-agricultural urban uses.	***Consistent.*** The proposed Specialty Agriculture land use designation would provide a transition between the Commercial Thoroughfare and Innovation Center on the northern portion (near Utica Avenue) to the agricultural uses to the south of the Plan Area. This would minimize and reduce the potential conflicts between the agricultural uses and non-agricultural uses.
LU Policy B2.2.1: Apply the Limited Agriculture or Open Space land use designation around Community Districts and Urban Fringe areas to serve as a buffer between urban and intensive agricultural uses.	***Consistent.*** The intent of the Limited Agriculture and Open Space designations is to provide a buffer between intensive agriculture uses and urban uses (Kings County 2010). Consistent with the intent of the Limited Agriculture or Open Space land use designation, the Specific Plan would dedicate the southern portion of the Plan Area as Specialty Agriculture, which would serve as a buffer and transition between the commercial and business

Table 5.8-2 Consistency with the Kings County General Plan Land Use Element

Relevant Goals, Objectives, and Policies	Project Compliance
	development on the northern portion of the Plan Area with the agricultural uses to the south.
LU Policy B2.2.2: The designation of new residential land use designations in Agriculture Open Space areas shall be restricted in order to preserve productive agricultural land and discourage premature conversion to non-agricultural related land uses.	***Consistent.*** The Specific Plan does not include residential land use designations. However, the proposed Specialty Agriculture land use designation would allow for housing opportunities that would support agricultural uses.
LU Objective B2.3: Increase diversified business opportunities within agricultural areas when they are compatible with agricultural operations.	***Consistent.*** The Specific Plan would allow for a variety of commercial, business, light industrial, and agricultural and supportive uses, which would diversity business opportunities. The Specialty Agriculture land use designation would allow for agriculture and supportive agriculture uses, including but not limited to agricultural operations, agricultural service establishments, specialty stores, animal keeping, harvesting/processes activities, farmers markets and residential.
LU Policy B2.3.1: Value added agriculturally related businesses may be allowed when the business operation is primarily associated with the commercial farming operation. Additional employees may be allowed to work at the business.	***Consistent.*** The Specific Plan would allow for a variety of agricultural uses and agricultural-related businesses, such as farmers markets, agriculture tourism, and agricultural research.
LU Policy B2.3.2: Allow establishment of Rural Home Occupations in agricultural zone districts when operated by the occupant(s) of a residence. The use must also remain unobtrusive to adjacent and nearby agricultural uses and services.	***Consistent.*** The Specialty Agriculture land use designation would allow for a variety of residential uses, including accessory living quarters (without a kitchen), farm employee housing, and single-family homes.
LU Goal B3: Allow agricultural support services within areas designated General Agriculture.	
LU Objective B3.1: Direct agricultural support services to General Agriculture land use designated areas, while ensuring that services are not harmful to the long term agricultural use of the land or potential future urban growth if within the Blueprint Urban Growth Boundary. **LU Policy B3.1.1:** Allow permanent agricultural service and processing facilities in areas designated General Agriculture, while restricting these types of services in Limited Agriculture and Exclusive Agriculture designated areas.	***Consistent.*** The Plan Area is currently designated General Agriculture. The Specific Plan would preserve approximately 268 acres of the 415-acre Plan Area as Specialty Agriculture which would allow for a variety of agricultural and agricultural support services, including but not limited to agriculture operations, specialty stores, bee keeping, harvesting and processing of agricultural products, horticultural services, animal keeping, retail stands, guest ranches, and farmers markets. The Specific Plan would support agricultural uses and growth to the region. The Specific Plan would increase the diversity of jobs in the region and serve as a full amenitized rest stop and commercial hub.
LU Policy B3.1.2: Review of agricultural service establishments under Site Plan Review shall consider the compatibility of such establishments with the potential future urban growth accommodation when proposed within the Blueprint Urban Growth Boundary.	***Consistent.*** The Plan Area is not within a Blueprint Urban Growth Boundary. Development under the Specific Plan would be required to comply with the requirements and procedures outlined in the Specific Plan and as approved by the County.
LU Goal B4: Housing within agricultural designated areas are primarily intended for the purposes of those engaged in farming, and for seasonal farm employee housing.	
LU Objective B4.1: Allow the permitting and construction of on-site farm employee housing uses that are incidental to an existing commercial farming operation. **LU Policy B4.1.1:** Base the number of agricultural housing units permitted per farm on the nature, intensity, and employment needs of the agricultural use of that farming operation. **LU Policy B4.1.2:** Require agricultural employee housing to be located on site in a manner that minimizes the effect on or loss of productive agricultural land and its productivity, but not to the detriment of the farm employee housing occupants.	***Consistent.*** The Specialty Agriculture land use designation of the Specific Plan would allow for the accessory living quarters without a kitchen; one single-family home per parcel; and up to four units of farm employee housing incidental to an existing primary residence, and temporary second dwelling units for persons 62 years of age or older who are immediate relatives to the occupant(s) of the primary dwelling. Additionally, farm employee housing is allowed with the approval of a conditional use permit. These housing types would support farming operations.

Table 5.8-2 Consistency with the Kings County General Plan Land Use Element

Relevant Goals, Objectives, and Policies	Project Compliance
LU Goal B5: Agricultural conservation efforts that serve to protect the County's agricultural economy do not hinder the ability of cities and community districts to accommodate well planned orderly growth, and do not foster discontinuous patterns of Urban Fringe or Community District development that lead to urban sprawl.	
LU Objective B5.1: Discourage long term conservation or intensive agricultural uses within city or community district Primary Sphere of Influences, so that the County's agricultural conservation efforts do not obstruct City or Community District plans to accommodate their future urban growth demands.	***Consistent.*** The Plan Area is not within a City or Community District's primary sphere of influences. The Specific Plan would serve as a full amenitized rest stop and commercial hub and would bring amenities to travelers on I-5 and provide space for new and existing businesses to grow. The Specific Plan would not obstruct a City or Community District plans to accommodate future urban growth. In addition, the Specialty Agriculture land use designation would allow for assessor living quarters (without kitchens), farm employee housing, single family homes, and temporary second dwelling units.
LU Policy B5.1.3: Restrict the creation of Farmland Security Zone contracts on land planned for urban uses under a County Community Plan or city general plan, and direct new Farmland Security Zone contract applications located within city areas of the Blueprint Urban Growth Boundary to the respective city for approval.	***Consistent.*** The Plan Area is not within a Farmland Security Zone contract, nor is a Farmland Security Zone contract planned for the Plan Area.
LU Objective B5.2: Restrict the locations where dairies may be located to those areas of the County where they are most compatible with surrounding uses, activities and environmental constraints as presented in the Dairy Element.	***Consistent.*** The Plan Area is within a DDOZ. The Specific Plan allows for animal keeping of small animals and livestock keeping in the Specialty Agriculture land use designation of the Specific Plan. .
LU Goal B6: Agricultural areas provide secondary benefits by serving as essential public safety buffers for strategic military installations and floodwater drainage, and serve to protect the wellbeing of residents and business investments which are critical to the sustainability of the County.	
LU Objective B6.1: Establish Exclusive Agriculture designated areas in coordination with Naval Air Station Lemoore (NAS Lemoore) officials to serve as an open space buffer for public safety purposes that is consistent with the base's defined areas of operation. **LU Objective B6.2**: Identify agricultural areas that may serve as emergency floodwater storage or drainage areas. **LU Policy B6.2.1:** Flood zones within the General Agriculture designations shall be considered appropriate land use areas that have the potential to receive emergency floodwater. Specific basin sites shall be determined by the relevant water, irrigation, reclamation or flood control district having authority over territories along waterways and the Tulare Lake Basin.	***Consistent.*** The Plan Area is not within a designated flood zone nor is the Plan Area within the Naval Air Station Lemoore military influence area (based on Figures LU-7 and Figure LU-8 of the General Plan Land Use Element). Therefore, the Specific Plan would not encourage commercial uses within a military influence area nor a flood zone, which would protect the wellbeing of residents and business investments within the Specific Plan.
LU Goal B7: Community benefiting non-agricultural uses remain compatible within the County's Agriculture Open Space area, and are supported for their continued operation and existence.	
LU Policy B7.1.1: Designate buffers around wastewater treatment facilities as Open Space and allow the continued use of the land for agricultural purposes.	***Consistent.*** The Specific Plan calls for the development of a wastewater treatment plant that would serve the uses of the Plan Area. The plant would be developed in the northwestern boundary of the Plan Area, within the Innovation Center land use designation. The Innovation Center land uses to the east and the continued agricultural uses to the north, west and south would help buffer the plant. Utica Avenue would also separate the wastewater treatment plant from off-site agricultural uses. Wastewater pipelines leading to the plant would be located underground in public rights-of-way and would not disturb adjacent properties.

Table 5.8-2 Consistency with the Kings County General Plan Land Use Element

Relevant Goals, Objectives, and Policies	Project Compliance
LU Policy B7.1.3: Power generation facilities for commercial markets shall be allowed and regulated through the Conditional Use Permit approval process, and include thermal, wind, and solar photovoltaic electrical generating facilities that produce power. Hydroelectric and cogeneration facilities shall also be regulated as conditional uses except as follows: 1. The installation of hydroelectric generating facilities, with a capacity of 5 megawatts or less, in connection with existing dams, canals, and pipelines shall be regulated as permitted uses, subject to issuance of a site plan review, that is categorically exempt pursuant to Section 15328 of the CEQA Guidelines. 2. The installation of cogeneration equipment with a capacity of 50 megawatts or less at existing facilities shall be regulated as permitted uses, subject to issuance of a site plan review, which is categorically exempt pursuant to Section 15329 of the CEQA Guidelines.	***Consistent.*** The Specific Plan allows for a variety of power generation facilities including active solar heating systems, biomass energy facilities and projects, co-generation equipment, gas and oil wells, solar electrical generation equipment for noncommercial personal use, and wind and solar photoelectric generating facilities that commercially produce power for future land uses of the Plan Area.
LU Goal C1: Rural pockets of urban uses in the agricultural areas remain limited in geographic area to the extent of preexisting residential, commercial and industrial land uses to prevent conflicts between agricultural and non-agricultural interests.	
LU Objective C1.1: Prohibit the expansion of new residential, commercial, and industrial land use designations within areas identified as Rural Interface.	***Consistent.*** The Plan Area is not in an area identified as Rural Interface; however, implementation of the Specific Plan would create a new community, which would be more in line with the "Rural Interface" and "Community District" Categories. The Rural Interface has small pockets of limited residential uses and do not have a special district to provide municipal type services.
LU Policy C1.1.1: Urban type land uses such as residential, commercial, and industrial that are located within Rural Interface areas shall remain limited to the previously defined extent of those land use designation areas. Minor adjustments between land uses may be considered so long as land use changes do not result in the expansion of Rural Residential zoning.	***Consistent.*** The Plan Area is not in an area identified as Rural Interface. All development as part of the Specific Plan would occur within the boundaries of the Plan Area. The Specific Plan incorporates a process and requirements for minor modifications to the Specific Plan; an example of a minor modification is a modification to the approved land uses in the Specific Plan, which does not increase land use density or intensity. The Specific Plan does not include Rural Residential zoning (RR).
LU Policy C1.1.2: Zone district changes in the Rural Interface areas may be considered when the proposed change would result in a similar type zoning or less intensive use, so long as the zoning remains compatible with the General Plan land use designation.	***Consistent.*** The Plan Area is not in a Rural Interface area. The Specific Plan would require a General Plan Amendment and a Development Code and Zoning District Map Amendment, which would change the zoning and land use designations of the Plan Area. All future development within the Specific Plan would be subject to the provisions and procedures outlined in the Specific Plan. All amendments to the Specific Plan would be subject to the established procedures for amending plans and the , including those of the Specific Plan and Kings County Development Code and would require public hearings.
LU Policy C1.1.4: Creation of new Rural Interface area(s) shall be prohibited. However, exceptions to this restriction may be considered when the new land use proposal meets the following criteria: 1. The new proposal is processed as a General Plan amendment and is simultaneously reviewed along with a detailed development proposal, which are both evaluated jointly under CEQA review. 2. The proposal does not include residential land uses. 3. Establishment of new commercial or industrial uses are limited in scope and serve to enhance the economic viability of the County. 4. The new proposal is located along a highway interchange or major arterial intersection, and is not located within an existing Urban Fringe or Community District area.	***Consistent.*** The Specific Plan meets the exception criteria as outlined in this policy, and thus would create a new Rural Interface area. Each point is discussed below and correspond to the numeric bullets in Policy C1.1.4: 1. The Specific Plan would require a general plan amendment, which is being processed through a detailed development proposal, which are both analyzed in this DEIR. 2. The Specific Plan does not include a residential land use designation. The Specific Plan includes the following designations: Commercial Thoroughfare, Innovation Center, and Specialty Agriculture. The Specific Plan would allow for

Table 5.8-2 Consistency with the Kings County General Plan Land Use Element

Relevant Goals, Objectives, and Policies	Project Compliance
5. Proposed new use(s) rely primarily upon existing traffic volumes, and do not serve as a new attractor or destination that creates substantial amounts of additional traffic. 6. The project demonstrates that provision of adequate services can be achieved to accommodate the full extent of proposed new development. 7. Property owner(s) and/or new businesses establish a zone of benefit to facilitate assessment(s) to cover additional service delivery costs determined necessary to support the new development.	residential development in the Specialty Agriculture designation, which would largely support agricultural uses. 3. The Specific Plan aims to provide a fully amenitized rest stop and commercial hub. The Specific Plan would allow for new commercial and light industrial uses that would enhance the economic viability of the County. 4. The Plan Area is adjacent to -5 and Utica Avenue exit (Exit 305) and is not within an existing Urban Fringe or Community District. 5. The Specific Plan would develop a rest stop and commercial hub that would serve travelers along I-5. Refer to Section 5.11, *Transportation*, for additional information and a detailed analysis of the Specific Plan's trip generation. 6. As substantiated in Sections 5.10, *Public Services*, and 5.13, *Utilities* and *Service Systems,* the Specific Plan Area would be adequately served by public services and utilities. 7. As outlined in the Specific Plan, a Business District Association would be established for the maintenance of common area improvements.
LU Goal D1: Community districts establish sustainable community areas that meet the needs of existing residents and serve to accommodate unincorporated urban growth that is guided according to individual community plans	
LU Policy D1.1.2: Community plans shall designate a variety and distribution of urban type land uses that include residential, commercial, industrial, open space, and other public land uses that can accommodate future projected unincorporated growth.	***Consistent.*** The Specific Plan incorporates three primary land use designations, including Innovation Center, Commercial Thoroughfare, and Specialty Agriculture, which would support commercial, industrial, open space, and other uses. These uses would support locations for new businesses, which supports job growth.
LU Objective D1.2: Establish Community Plan land use policies and associated improvement standards to integrate smart growth principles and compact urban design to revitalize existing communities.	***Consistent.*** The Specific Plan incorporates a land use plan, mobility plan, infrastructure plan, development standards and design guidelines to guide development within the Plan Area. While the Plan Area is not in an existing Community District, the Plan Area is approximately 4.2 miles south of the Kettleman City exit and Community District. The Specific Plan provides for the development of a rest stop and commercial hub, which would provide additional business expansion and job opportunities.
LU Policy D1.2.3: Proposed land uses on agriculture designated land within any Community Plan shall comply with the provisions of Section C of the County's Land Use Element policies for Agriculture Open Space.	***Consistent.*** Any development within the Specialty Agriculture land use designation of the Plan Area would be required to comply with the provisions of the Specific Plan, including permitted land use, development standards, and design guidelines. Development would also be required to comply with all applicable provisions of the County's General Plan and Code of Ordinances.
LU Policy D1.2.4: Community Plans shall establish additional land use policies as determined necessary to address specific conditions within each Community District that enhance the quality of life of residents.	***Consistent.*** All development under the Specific Plan, which serves as both a community plan and specific plan, would be required to comply with the provisions of the Specific Plan.
LU Policy D1.3.2: Require all new development to comply with County General Plan and Community Plan policies, and subdivision, zoning, and building regulations.	***Consistent.*** All development under the Specific Plan would be required to comply with the provisions and procedures of the Specific Plan and all applicable County plans and codes.
LU Policy D1.3.3: Require all new development to improve all access roads to the nearest maintained right-of-way.	***Consistent.*** The Specific Plan calls for improvements to Utica Avenue and 25th Avenue to accommodate the additional traffic generated from vehicles traveling to the Plan Area. Roadway improvements would include landscaping, sidewalks, and travel lane improvements.

Table 5.8-2 Consistency with the Kings County General Plan Land Use Element

Relevant Goals, Objectives, and Policies	Project Compliance
LU Policy D1.3.4: Preserve the existing nighttime environment by limiting the illumination of areas surrounding new development. New lighting that is part of residential, commercial, industrial, or recreational development shall be oriented away from sensitive uses, and should be hooded, shielded, and located to direct light pools downward and prevent glare.	***Consistent.*** The Specific Plan development standards include outdoor lighting requirements, which calls for "Night Sky Friendly" lighting fixtures and standards. Lighting within the Plan Area shall comply with the standards established by the International Dark Sky Association, which are more restrictive than the policies required in this policy.
LU Objective D1.4: Designate sufficient residential land to accommodate projected urban population growth to the year 2035 and encourage development of safe and affordable quality housing alternatives for all income levels while ensuring the proper payment of fair share impact fees.	***Consistent.*** The Specific Plan does not include a residential land use designation; however, the Specialty Agriculture designation allows for limited residential uses that would support agriculture workers and the existing community. All development under the Specific Plan, including agricultural-related residential development, would be required to pay all applicable fair share impact fees.
LU Policy D1.4.9: Development shall pay County Public Facility Impact Fees, as established by County Ordinance 633, at the time a building permit is issued.	***Consistent.*** Development under the Specific Plan would be required to comply with all applicable County fees, including Public Facilities Impact Fees.
LU Policy D1.5.1: Locate retail commercial uses within close proximity to transportation routes and residential areas.	***Consistent.*** The Specific Plan allows for a variety of retail commercial uses at the Utica Avenue on-/off ramps at I-5, which is considered a major transportation route. The Plan Area is approximately 4.2 miles south of Kettleman City, which contains residential development.
LU Policy D1.5.2: Locate industrial uses near transportation corridors and multi-modal facilities, and away from residential concentrations.	***Consistent.*** The Specific Plan would allow for light industrial uses, including but not limited to automotive testing facilities, light manufacturing and assembly, office/industrial flex space, research and development, and warehouse. These uses would be allowed by right or with the approval of a site plan review or conditional use permit within the Commercial Thoroughfare and Innovation Center land use designations of the Specific Plan. The Plan Area is just off the I-5 and approximately 4.2 miles south of Kettleman City, which contains residential development.
LU Policy D1.5.3: Leverage the County's Enterprise Zone to increase commercial and industrial business development.	***Consistent.*** The Plan Area is not in an Enterprise Zone. The nearest Enterprise Zone is near Kettleman City. At its nearest point, the Enterprise Zone is approximately 2.8 miles north of the Plan Area (HCD 2020). The Specific Plan would allow for a variety of commercial, light industrial, and agricultural and agricultural supportive uses, which contributes to business development and opportunities. The Specific Plan buildout would support commercial and industrial business development near an Enterprise Zone.
LU Policy D1.5.4: Prevent encroachment of incompatible uses in designated commercial and industrial designated areas.	***Consistent.*** Development under the Specific Plan would be required to comply with the provisions of the Plan, including the allowable uses for each land use designation, which are in place to ensure the compatibility between uses.
LU Policy D1.6.8: Refer development proposals within a Secondary Sphere of Influence of either a Community Services District or Public Utilities District to that district for review and comment.	***Consistent.*** The Specific Plan area is not within a Secondary Sphere of Influence; however, through the CEQA process, the Specific Plan solicits review and comment from local agencies, members of the public and other stakeholders.

Source: Kings County 2010.

Specific Plan – Phase One Buildout

The Phase One development area consists of the portion of the Specific Plan designated as Commercial Thoroughfare (see Figure 3-4, *Specific Plan Land Use Plan*). The Commercial Thoroughfare component of the Specific Plan is designed to provide a safe location for travels to stop along I-5. The Commercial Thoroughfare component would provide a range of amenities directed towards travelers, including a transportation plaza, delivering food, lodging, businesses and professional, medical, and personal services, retail, and entertainment. The consistency analysis for the Phase One portion of the Specific Plan Buildout is incorporated Tables 5.8-1 and 5.8-2 above. As demonstrated in these tables, Phase One buildout would not conflict with adopted plans applicable to the Specific Plan, including KCAG's 2018 RTP/SCS or the Kings County General Plan.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* in order to provide potable water to the future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The water main would be installed by and paid for by the project applicant/developer. Upon completion, the water main would be dedicated to the Kettleman City Community Services District (KCCSD) for ownership and maintenance. The proposed water main would run from the northern boundary of the Plan Area to the new Kettleman City Surface Water Treatment Plant (SWTP), which is owned and operated by KCCSD (see Figure 3-6, *Proposed Offsite Water Main Route*).

Implementation of the water main would be subject to review and approval by the County and KCCSD. It would also require approval from the Local Agency Formation Commission of Kings County for any KCCSD boundary or service extension that may be needed to serve the Specific Plan's potable water needs. Currently, the Plan Area is not in KCCSD's service area or sphere of influence (SOI) and therefore requires a SOI Amendment and service extension authorization with future annexation into their service area Expanding the KCCSD SOI to include the Interstate 5/Utica Avenue area and anticipated annexation into the district are in line with the County's General Plan goals and policies that direct highway-commercial development projects to consolidate with the most adjacent water service provider. In this case, Jackson Ranch would connect to KCCSD in lieu of developing an onsite private water system that depends on water from the State Water Project via the California Aqueduct.

Based on the preceding, implementation of the water main would not conflict with adopted plans applicable to the Specific Plan, including KCAG's 2018 RTP/SCS or the Kings County General Plan.

5.8.4 Cumulative Impacts

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. However, implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in a change in land use patterns and land uses.

However, other development projects in the County would be required to undergo discretionary review and would be subject to the same CEQA review as the Specific Plan. For example, as with the Specific Plan, other development projects would be required to analyze the potential land use and planning impacts that could result from the projects. They would also be required to demonstrate their consistency with applicable land use goals and policies of the Kings County General Plan, as well as with other applicable plans and regulations governing land use (e.g., KCAG's 2018 RFP/SCS). Additionally, as with the Specific Plan, other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address land use and planning impacts.

Furthermore, as demonstrated above, the Specific Plan would be consistent with KCAG's 2018 RTP/SCS and Kings County General Plan, which are land use plans adopted for the purpose of avoiding or mitigating an environmental effect. Specifically, Table 5.8-1 provides an analysis as to why the Specific Plan is consistent (i.e., "compatible") with the KCAG's 2018 RTP/SCS and Table 5.8-2 provides an analysis of why the Specific Plan is compatible with Kings County's General Plan.

In consideration of the preceding, the Specific Plan's contribution to cumulative land use and planning impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.8.5 Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to land use and planning apply to the Specific Plan and are described in detail in Section 5.8.1.1, *Regulatory Background*, above.

- California Government Code (Title 7, Division 1, Chapter 3, Article 8, Sections 65450–65457 [Specific Plans])
- KCAG 2018 RTP/SCS
- Kings County General Plan
- Kings County Development Code

5.8.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impact would be less than significant: 5.8-1.

5.8.7 Mitigation Measures

No significant adverse impacts related to land use and planning were identified and no mitigation measures are necessary.

5.8.8 Level of Significance After Mitigation

No significant adverse impacts related to land use and planning were identified.

5.8.9 References

California Department of Housing and Community Development (HCD). 2020. Active Enterprise Zones: Kings County Enterprise Zones Kings County. https://www.hcd.ca.gov/grants-funding/archive/enterprise-zone.shtml.

Kings County Association of Governments (KCAG). 2018, August 22. 2018 Regional Transportation Plan/Sustainable Communities Strategy.

Kings County Community Development Agency. 2010, January 26. Land Use Element. In 2035 Kings County General Plan. https://www.countyofkings.com/home/showdocument?id=15995.

———. 2019, March 1. Development Code. https://www.countyofkings.com/departments/community-development-agency/information/zoning-ordinance.

5. Environmental Analysis
LAND USE AND PLANNING

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5.9 NOISE

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Jackson Ranch Specific Plan (Specific Plan) to result in noise impacts in the area covered by the Specific Plan (Plan Area) and pertinent areas of unincorporated Kings County. This section examines federal, state, and local noise guidelines, policies, and standards; reviews existing noise levels in the project area; and evaluates potential noise and vibration impacts associated with implementation of the Specific Plan.

5.9.1 Environmental Setting

Noise Descriptors

The following are brief definitions of terminology used in this chapter.

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."
- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.

- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 pm to 10:00 pm and 10 dB from 10:00 pm to 7:00 am. For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive, that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.

- **Peak Particle Velocity (PPV).** The peak signal value of an oscillating vibration velocity waveform, usually expressed in inches per second (in/sec).

- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

5.9.1.1 REGULATORY BACKGROUND

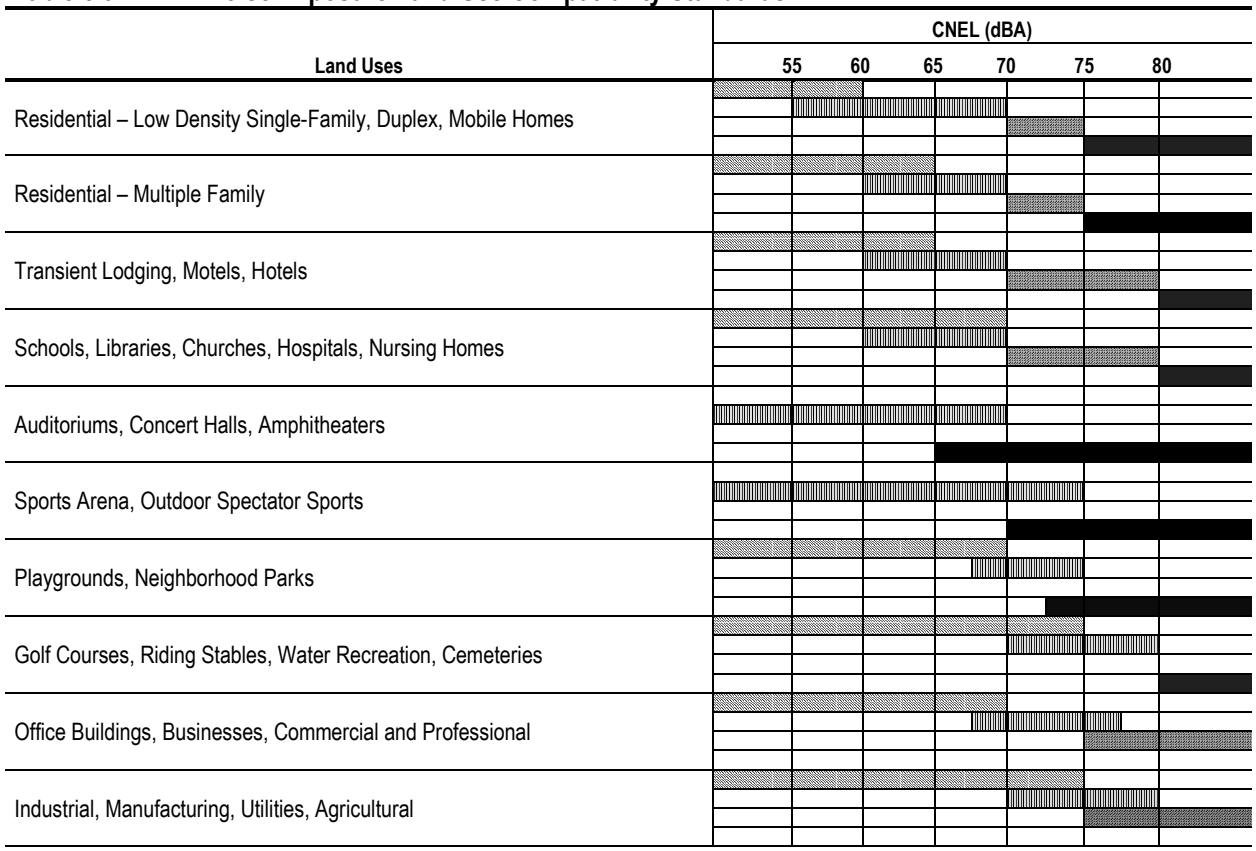
To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. Applicable federal, state and local laws, regulations, plans, or guidelines that are applicable to the Specific Plan are summarized below.

State

General Plan Guidelines

The State of California, through its General Plan Guidelines, discusses how ambient noise should influence land use and development decisions and includes a table of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable uses at different noise levels expressed in CNEL. These land use compatibility guidelines are shown in Table 5.9-1. A conditionally-acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements. This table provides urban planners with a tool to gauge the compatibility of land uses relative to existing and future noise levels.

Table 5.9-1 Noise Exposure Land Use Compatibility Standards



	Normally Acceptable: Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.		**Normally Unacceptable:** New construction or development should generally be discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.		**Clearly Unacceptable:** New construction or development generally should not be undertaken.

Source: Governor's Office of Planning and Research, State of California General Plan Guidelines. 2017.

California Building Code

The California Building Code (CBC), Title 24, Part 2, Volume 1, Chapter 12, Interior Environment, Section 1207.11.2, Allowable Interior Noise Levels, requires that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric is evaluated as either the day-night average

sound level (Ldn) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

The State of California's noise insulation standards for non-residential uses are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 11, California Green Building Standards Code (CALGreen). CALGreen noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65 dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA $L_{eq(1hr)}$.

Residential structures and habitable dwellings located within the noise contours identified above require an acoustical analysis showing that the structure has been designed to limit intruding noise in the prescribed allowable levels. To comply with these regulations, applicants for new residential projects are required to submit an acoustical analysis report. The report is required to show topographical relationship of noise sources and dwelling site, identification of noise sources and their characteristics, predicted noise spectra at the exterior of the proposed dwelling structure considering present and future land usage, basis for the prediction (measured or obtained from published data), noise attenuation measures to be applied, and an analysis of the noise insulation effectiveness of the proposed construction showing that the prescribed interior noise level requirements are met. If interior allowable noise levels are met by requiring that windows be unopenable or closed, the design for the structure must also specify the means that will be employed to provide ventilation and cooling, if necessary, to provide a habitable interior environment.

Local

Kings County General Plan

The Noise Element of Kings County General Plan include goals and policies that aim to minimize the impact of noise sources and ambient noise levels, transportation related noise, and noise impacts from sources other than transportation. The following goals and policies are directly relevant to the Specific Plan:

- **N Goal A1:** Protect existing and future residents of Kings County from the harmful effects of exposure to excessive noise. More specifically, to protect existing noise-sensitive land uses from new uses that would generate noise levels which are incompatible with those uses, and to discourage new noise-sensitive land uses from being developed near sources of high noise levels.

    - **N Policy A1.1:** Appropriate noise mitigation measures shall be included in a proposed project design when the proposed new use(s) will be affected by traffic or railroad noise sources and exceed the County's "Noise Standards for New Uses Affected by Transportation Noise Sources". Mitigation measures shall reduce projected noise levels to a state of compliance with this standard.

- **N Goal B1:** Protect the economic base of Kings County by preventing the encroachment of noise-sensitive land uses into areas affected by existing noise-producing uses. More specifically, to recognize that noise is an inherent byproduct of many land uses, including agriculture, and to prevent new noise-sensitive land uses from being developed in areas affected by existing noise-producing uses.

    - **N Policy B1.1.1:** Appropriate noise mitigation measures shall be included in a proposed project design when the proposed new use(s) will be affected by or include non-transportation noise sources and exceed the County's "Non-Transportation Noise Standards" (Table 5.9-3). Mitigation measures shall reduce projected noise levels to a state of compliance with this standard within sensitive areas. These standards are applied at the sensitive areas of the receiving use.

    - **N Policy B1.1.2:** Noise associated with construction activities shall be considered temporary, but will still be required to adhere to applicable County Noise Element standards.

The Kings County Noise Element also includes noise compatibility standards for new uses affected by transportation and non-transportation noise sources. Table 5.9-2 and Table 5.9-3 summarizes noise standards by land use.

Table 5.9-2 Noise Standards for New Uses Affected by Transportation Noise Sources

New Land Use	Noise Level (dBA)		
	Outdoor Area – CNEL	Interior Area – CNEL	Notes
Residential	60	45	1,2,5
Residences in agricultural zones	65	45	1,2,6
Transient lodging	65	45	1,2,3,5
Hospitals and Nursing Homes	60	45	1,2,3,4,5
Theaters and auditoriums	—	35	1,2,3
Churches, meeting halls, schools, libraries	60	40	1,2,3
Office buildings	65	45	1,2,3
Commercial Buildings	65	50	1,2,3
Playgrounds, Parks, etc.	70	—	
Industry	65	50	1,2,3

Source: Kings County 2035 General Plan

1 Sensitive areas are defined acoustic terminology section.

2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.

3 Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.

4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

5. If this use is affected by railroad or aircraft noise, a maximum (Lmax) noise level standard of 70 dB shall be applied to all sleeping rooms with windows closed to reduce the potential for sleep disturbance during nighttime noise events. 6. Due to the noise-generating nature of agricultural activities, it is understood that residences constructed on agriculturally designated land uses may be exposed to elevated noise levels. As a result, a 65 dB CNEL exterior noise level standard is applied to noise-sensitive outdoor areas of these uses.

Table 5.9-3 Non-Transportation Noise Standards

New Land Use	Noise Level Average L_{eq}/ Maximum L_{max}[1]			
	Daytime	Nighttime	Day & Night	Notes
All Residential	55 / 75	50/70	35 / 55	—
Transient lodging	55 / 75	—	35 / 55	4
Hospitals and Nursing Homes	55 / 75	—	35 / 55	5,6
Theaters and auditoriums	—	—	60 / 50	6
Churches, meeting halls, schools, libraries	55 / 75	—	35 / 60	6
Office buildings	60 / 75	—	45 / 65	6
Commercial Buildings	55 / 75	—	45 / 65	6
Playgrounds, parks, etc.	65 / 75	—	—	6
Industry	60 / 80	—	50 / 70	6

Source: Kings County 2035 General Plan

1. The standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive areas are defined acoustic terminology section.
3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
5. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients. 6. The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.

Municipal Code

There are no applicable noise standards in the King's County Municipal Code that are applicable to the Specific Plan.

5.9.1.2 EXISTING CONDITIONS

As shown in Figure 3-3, *Aerial Photograph*, the Plan Area is an undeveloped rural area of the County and is bounded by Utica Avenue to the north, I-5 to the east and the California Aqueduct to the west. The Plan Area primarily consist of active and fallow agricultural land or grazing lands. There are no nearby noise-sensitive receptors to the Plan Area. Although there is a residential structure approximately 470 feet east of the northwestern Plan Area boundary, there are no individuals residing there and the structure is used for storage purposes only. The site is primarily characterized by traffic noise from I-5 and local roadways.

5.9.2 Thresholds of Significance

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

N-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.

N-2 Generation of excessive groundborne vibration or groundborne noise levels.

N-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold N-2
- Threshold N-3

These impacts will not be addressed in the following analysis.

This noise evaluation was prepared in accordance with the requirements of CEQA to determine if implementation of the Specific Plan would result in significant construction and operational impacts at nearby sensitive receptors. Per *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (No. S 213478) (*CBIA v. BAAQMD*), noise compatibility for onsite sensitive receptors, such as motel uses, is no longer the purview of the CEQA. However, the County requires that any future d projects developed under the Specific Plan with habitable dwelling units be designed to achieve the interior noise standards of Title 24.

5.9.3 Environmental Impacts

5.9.3.1 IMPACT ANALYSIS

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

Impact 5.9-1: Construction activities of development projects accommodate by the Specific Plan would result in temporary construction noise increases in the vicinity of the Plan Area. [Threshold N-1]

Impact Analysis. Two types of short-term noise impacts could occur during construction activities of development that would be accommodated by the Specific Plan: (1) mobile-source noise from transport of workers, material deliveries, and debris and soil haul and (2) stationary-source noise from use of construction equipment.

Following is a discussion of the potential short-term, construction-related noise impacts as a result of development that would be accommodated by the Specific Plan.

Specific Plan – Plan Area Buildout

Construction Vehicles

The transport of workers and materials to and from individual construction sites in the Plan Area would incrementally increase noise levels along site access roadways. Individual construction vehicle pass-bys may

create momentary noise levels of up to approximately 85 dBA Lmax at 50 feet from the worker and vendor vehicles. However, these occurrences would generally be infrequent and short-lived as they would cease upon completion of each construction phase. In addition, there are no nearby noise-sensitive receptors adjacent to or in the vicinity of the Plan Area. As shown in Figure 3-3, *Aerial Photograph*, surrounding land uses primarily consist of active and fallow agricultural land or grazing lands. Although there is a residential structure approximately 470 feet east of the northwestern Plan Area boundary, there are no individuals residing there and the structure is used for storage purposes only. Therefore, noise impacts from construction haul trips are not anticipated to occur.

Construction Equipment

Noise generated by onsite construction equipment is based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Each stage of construction involves different kinds of equipment and has distinct noise characteristics. Noise levels from construction activities are typically dominated by the loudest several pieces of equipment. The dominant equipment noise source is typically the engine, although work-piece noise (such as dropping of materials) can also be noticeable.

Construction activities of individual development projects would temporarily elevate existing ambient noise levels in and around the Plan Area. However, these occurrences would generally be infrequent and short-lived as they would cease upon completion of each construction phase. Additionally, as noted above, there are no nearby sensitive receptors in the vicinity of the Plan Area. Therefore, noise impacts from construction equipment are not anticipated to occur.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, noise impacts from construction activities (including construction vehicles and equipment) are not anticipated to occur.

Specific Plan – Offsite Water Infrastructure Improvements

Implementation of the Specific Plan would include on- and offsite construction-related activities. Onsite activities are discussed above. As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* offsite improvements include the installation of a water main system to provide portable water to future uses of the Plan Area. An offsite water main would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The roadway is a north-south, two-lane road that is surrounded by agricultural uses on both sides and runs from the Plan Area to Kettleman City. The water main would stretch along this roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Construction activities associated with the water main installation would temporarily elevate existing ambient noise levels not only around the northern boundary of the Plan Area, which is formed by 25th Avenue, but

also along the aforementioned stretch of 25th Avenue. However, based on a review of Google aerial maps, there are no sensitive receptors between the water treatment plant and the Plan Area, and no sensitive receptors in the vicinity of the Plan Area. As noted above, 25th Avenue is surrounded by agricultural uses on both sides and runs from the Plan Area to Kettleman City. Additionally, construction activities would be temporary as they would cease upon completion of water main construction phase. Therefore, noise impacts are not anticipated to occur.

Impact 5.9-2: Implementation of the Specific Plan would result in long-term operation-related noise increases, but not an extent that would exceed local standards or impact sensitive uses. [Threshold N-1]

Impact Analysis. Implementation of the Specific Plan would result in the creation of long-term, operation-related noise sources in and around the Plan Area, as well as along surrounding roadways. Following is a discussion of the potential long-term noise impacts as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Regarding mobile noise sources, implementation of the Specific Plan would result in the generation of new vehicle trips along roadways serving the Plan Area, including I-5 and Utica Avenue. the Plan Area is west of I-5 and existing average daily traffic volumes (ADT) along the freeway are 39,500 south of Utica Avenue (Caltrans 2017). Traffic volumes resulting from implantation of the Specific Plan were obtained from the traffic impact analysis prepared for the project (Kittelson 2020). When compared to the worst case Specific Plan buildout scenario of an estimated 10,216 net daily trips generated during Friday peak hour, traffic noise is estimated to increase by 1 dBA along I-5, which would not be perceptible. Also, although the new trips would increase traffic noise on Utica Avenue, there are no sensitive receptors along this roadway. Therefore, traffic noise impacts are not anticipated to occur.

Regarding non-mobile noise sources, development that would be accommodated by the Specific Plan would also result in the generation of noise related to heating, ventilation, and air conditioning (HVAC) mechanical equipment. However, as shown in Figure 3-3, *Aerial Photograph*, surrounding land uses primarily consist of active and fallow agricultural land or grazing lands. There are no sensitive receptors abutting or surrounding the Plan Area. Therefore, stationary noise impacts are not anticipated to occur.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, noise impacts from operational activities (including mobile and non-mobile sources) are not anticipated to occur

Specific Plan – Offsite Water Infrastructure Improvements

As described above, offsite improvements of the Specific Plan include the installation of a water main system to provide portable water to future uses of the Plan Area. The water main would stretch along 25th Avenue for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant. However, installation of this water main would not result in the creation of any mobile or non-mobile noise sources. Therefore, no long-term noise impacts from this offsite improvement are anticipated to occur.

5.9.4 Cumulative Impacts

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. However, implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in the generation of temporary (construction) and long term (mobile and non-mobile) noise sources.

However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, as with the Specific Plan, other development projects would be required to analyze the potential noise impacts that could result from implementation of those projects. Additionally, as with the Specific Plan, other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address noise impacts. Furthermore, as demonstrated above, implementation of the Specific Plan would not result in a cumulative impact relative to short- or long-term noise sources in the County.

In consideration of the preceding, the Specific Plan's contribution to cumulative noise impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.9.5 Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to noise apply to the Specific Plan and are described in detail in Section 5.9.1.1, *Regulatory Setting*, above.

- Kings County General Plan

5.9.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.9-1 and 5.9-2.

5.9.7 Mitigation Measures

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

5.9.8 Level of Significance After Mitigation

No significant adverse impacts related to noise were identified.

5.9.9 References

California Department of Transportation (Caltrans). 2017. Traffic Volumes: Route 5-6. https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes/2017.

Governor's Office of Planning and Research. 2017. State of California General Plan 2017 Guidelines.

Kittelson & Associates, Inc. 2020, March. Traffic Impact Analysis.

5. Environmental Analysis
NOISE

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5.10 PUBLIC SERVICES

This section of the Draft Environmental Impact Report (DEIR) addresses the Jackson Ranch Specific Plan's (Specific Plan) impacts to public services providing fire protection and emergency services as well as police protection services in Kings County. The Initial Study, included as Appendix A, substantiates that impacts associated with public services would be less than significant for school, park, and library services. These topics are not addressed in the following analysis. The analysis in this section is based in part on the service provider questionnaires provided in Appendix F of this DEIR.

Public and private utilities and service systems, including water, wastewater, and solid waste services and systems, are addressed in Section 5.13, *Utilities and Service Systems*.

5.10.1 Fire Protection and Emergency Services

The information in this subsection is based partly on written responses to a questionnaire provided by Rick Levy, Fire Marshal, Kings County Fire Department dated October 8, 2019. A copy of the questionnaire is included in Appendix F of this DEIR.

5.10.1.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal, state, and local laws, regulations, plans, or guidelines related to fire protection and emergency services that are applicable to the Specific Plan are summarized below.

Federal

International Fire Code

The International Fire Code (IFC) regulates minimum fire safety requirements for new and existing buildings, facilities, storage, and processes. The IFC includes general and specialized technical fire and life safety regulations addressing fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, use and storage of hazardous materials, protection of emergency responders, industrial processes, and many other topics. The IFC is issued by the International Code Council, which is an international organization of building officials.

State

California Health and Safety Code

Sections 13000 et seq. of the California Health and Safety Code include fire regulations for building standards (also in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Fire Code

The California Fire Code (CFC; California Code of Regulations Title 24, Part 9) sets forth requirements including emergency access, emergency egress routes, interior and exterior design and materials, fire safety features including sprinklers, and hazardous materials. The CFC is issued on a three-year cycle; the 2019 Edition (the most recent version, which took effect January 1, 2020) of the CFC is adopted and incorporated by reference in Chapter 10 (Fire Protection and Prevention) of the Kings County Code of Ordinances.

Local

Kings County Code of Ordinances

As noted above, the CFC is adopted and incorporated by reference in Chapter 10 (Fire Protection and Prevention) of the Kings County Code of Ordinances. Section 10-1c (Adoption of the California Fire Code) states that the 2019 edition of the CFC in its entirety, together with the amendments, additions, deletions, and exceptions in Chapter 10, are the adopted fire code of the County.

Kings County Adopted Public Facility Impact Fees

Per the Kings County General Plan Land Use Element, applicants of future development projects (both residential and nonresidential) in the County are required to pay Public Facility Impact Fees established by Kings County Ordinance 633. The established impact fees are allocated to specific uses for Countywide protection and public services including public protection, police, and fire firefighters (Kings County 2010). The purpose of the impact fee is to ensure that new development finances its fair share of public facilities and services needed to serve the County.

Existing Conditions

Fire protection and emergency medical services in Kings County, including the Plan Area, are provided by the Kings County Fire Department (KCFD), which operates out of their headquarters location in the City of Hanford. KCFD maintains one department headquarters and 10 fire stations strategically located throughout the County, which are staffed by 88 full time employees (KCFD 2019).

Fire Stations, Staffing, and Equipment

The closest KCFD fire stations to the Plan Area are Station No. 9 at 85 Brown Street, approximately 6 miles to the northwest and Station No. 12 at 516 Fresno Street, approximately 19 miles to the northwest. Primary fire and emergency services to the Plan Area would be provided from Station No. 9. Existing equipment and staffing at these two KCFD fire stations are described in Table 5.10-1.

Table 5.10-1 Kings County Fire Department Stations

Station	Location	Equipment	Daily Staffing
Station No. 9	85 Brown St, Suite B, Kettleman City, CA 93239	Type 1 Fire Engine	3 staff
Station No. 12	516 Fresno Street, Avenal, CA 93204	Type 1 Fire Engine	2 staff

Source: Levy 2019.

Performance Standards

KCFD's response time is the time between receipt of a service call and the on-scene arrival of a fire unit. Table 5.10-2 details the performance standards and response times for KCFD, which has an estimated response time of 15 minutes. However, KCFD does not yet have data for the Plan Area.

Table 5.10-2 Kings County Fire Department Performance Standards

Activity/Incident Type	Overall Time in Minutes (from receipt of call to arrival onsite)
First-in Response Unit	15 Minutes (due to location)
First-in Engine Truck	90 Minutes/ (due to location)
First-in Basic Life Support Response Unit (Engine)	9 to 15 minutes (due to location)
First- in Advanced Life Support	—[1]
First-in Paramedic Assessment	—[1]

Source: Levy 2019.
[1] These services are provided by a private contractor (American Ambulance), for which information on performance standards was not available at this time.

Funding

Funding for KCFD facilities, staffing and operations comes primarily from the County's property tax (Levy 2019). As also noted above, per the Kings County General Plan Land Use Element, applicants of future development projects (both residential and nonresidential) in the County are required to pay Public Facility Impact Fees established by Kings County Ordinance 633. The established impact fees are allocated to specific uses for Countywide protection and public services including public protection, police, and fire (Kings County 2010). Adopted fees pursuant to Kings County Ordinance 633 and effective as of October 2018 are detailed in Table 5.10-3.

Table 5.10-3 Kings County Fire Facility Impact Fees (Effective October 2018)

Land Use Type	Fee
Residential	
Single-Family	$1,943 per unit
Multifamily	$1,554 per unit
Non-Residential	
Retail	$609 per unit
Office	$761 per unit
Industrial	$457 per unit

Source: Kings County 2018.

5.10.1.2 THRESHOLDS OF SIGNIFICANCE

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

FP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

5.10.1.3 ENVIRONMENTAL IMPACTS

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

Impact 5.10-1: Implementation of the Specific Plan would introduce new structures workers, and visitors into the Kings County Fire Department service boundaries, thereby increasing the requirement for fire protection and emergency services. [Threshold FP-1]

Impact Analysis: Following is a discussion of the potential impacts to fire protection and emergency services as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Implementation of the Specific Plan would result in an increase in the overall demand on fire protection and emergency services in the Plan Area and its surroundings. Future growth (introduction of new structures, workers, and visitors) is expected to create the typical range of fire and emergency service calls, and increase the need for new fire facilities, apparatus, and personnel in order to maintain adequate response times. KCFD's costs to maintain equipment and apparatus and to train and equip personnel would also increase.

As stated above, the County has 10 existing fire stations strategically located throughout the County. Primary fire and emergency services to the Plan Area would be provided from Station No. 9, approximately six miles to the northwest in Kettleman City. As shown in Table 5.10-2, *Kings County Fire Department Performance Standards*, KCFD has an estimated response time of 15 minutes. However, KCFD does not yet have data for the Plan Area and response times are not known at this time. Although data for the Plan Area is not available, implementation of the Specific Plan is also not anticipated to impact KCFD's response time to the Plan Area or its surroundings. Also, in the event of an emergency in the Plan Area that requires more resources than available at Station No. 9, KCFD would direct resources to the Plan Area from other KCFD stations, including Station No. 10 approximately 19 miles to the northwest in Avenal.

The potential demand for additional personnel, equipment, and operational costs generated by the Specific Plan would also be funded and offset through the property tax revenue generated from additional development that would be allowed under the Specific Plan. Additionally, individual development projects

would be reviewed by the County and KCFD and be required to comply with the requirements in effect at the time building permits are issued, including the payment of Public Facility Impact Fees related to fire facilities established in Kings County Ordinance 633 (see Table 5.10-3, *Kings County Fire Facility Impact Fees (Effective October 2018)*). Fees collected under this ordinance are utilized for payment of the actual or estimated costs of fire facilities, apparatus, and equipment related to new nonresidential construction in the County. Payment of these fees ensures that individual project applicants pay their fair share of costs related to fire protection services and facilities.

The County also involves KCFD in the development review process in order to ensure that the necessary fire prevention and emergency response features are incorporated into individual development projects. During the County's development review and permitting process, KCFD would review and approve individual development projects to ensure that adequate facilities, infrastructure, and access are provided to serve the needs of KCFD as detailed in the Specific Plan. Specific fire and life-safety requirements for the construction phase of future development projects that would be accommodated by the Specific Plan would be addressed at the building and fire plan check review stage for each development project.

Finally, all development projects that would be accommodated by the Specific Plan would be required to comply with the most current adopted fire codes, building codes, and nationally recognized fire and life safety standards of Kings County and the State of California. These codes and standards impose design standards and requirements that seek to minimize and mitigate fire risk. For example, development projects would be required to comply with the most current edition (2019, which took effect January 1, 2020) of the CFC, which is adopted and incorporated by reference in Chapter 10 (Fire Protection and Prevention) of the Kings County Code of Ordinances. Compliance with these codes and standards is ensured through the County's and KCFD's development review and building plan check process.

Based on the preceding, implementation of the Specific Plan would not adversely affect KCFD's ability to provide adequate fire protection and emergency services and would not require new or expanded fire facilities that could result in adverse environmental impacts.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, implementation of the Specific Plan would not adversely affect KCFD's ability to provide adequate fire protection and emergency services and would not require new or expanded fire facilities that could result in adverse environmental impacts.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The roadway is a north-south, two-lane road that is surrounded by agricultural uses

on both sides and runs from the Plan Area to Kettleman City. The water main would stretch along this roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Implementation of the offsite water main improvements would not directly or indirectly impact fire protection and emergency services. The 25th Avenue roadway right-of-way is fully disturbed and consists of pavement and some areas of compacted soil. The roadway would continue to serve as an alternative means of emergency access to the Plan Area, with primary and more direct and quicker access being provided via Interstate 5. Therefore, implementation of the offsite water infrastructure improvements would not adversely affect KCFD's ability to provide adequate fire protection and emergency services and would not require new or expanded fire facilities that could result in adverse environmental impacts.

5.10.1.4 CUMULATIVE IMPACTS

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. However, implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in a cumulative impact to fire protection and emergency services.

However, other development projects in the County would be required to undergo discretionary review and would be subject to the same CEQA review as the Specific Plan. Additionally, as with the Specific Plan, other development projects in the County would be reviewed by the County and KCFD to comply with the requirements in effect at the time building permits are issued, including the payment of Public Facility Impact Fees related to fire facilities established in Kings County Ordinance 633. KCFD would also review and approve other development projects to ensure that adequate facilities, infrastructure, and access are provided to serve the needs of KCFD. Furthermore, other development projects would be required to comply with the most current adopted fire codes, building codes, and nationally recognized fire and life safety standards of Kings County and the State of California. Finally, a periodic review process conducted by KCFD would ensure that adequate service would be maintained throughout the County and would add staffing and equipment as deemed necessary.

In consideration of the preceding, the Specific Plan's contribution to cumulative fire protection and emergency service impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.10.1.5 EXISTING REGULATIONS

The following laws, regulations, plans, or guidelines pertain to fire protection and emergency services apply to the Specific Plan and are described in detail in Section 5.10.1.1, *Environmental Setting*, above.

- California Health and Safety Code
- California Fire Code (California Code of Regulations Title 24, Part 9)

- Kings County Ordinance 633
- Chapter 10 (Fire Protection and Prevention), Kings County Code of Ordinances

5.10.1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impact would be less than significant: 5.10-1

5.10.1.7 MITIGATION MEASURES

No significant adverse impacts related to fire protection and emergency services were identified and no mitigation measures are necessary.

5.10.1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant adverse impacts related to fire protection and emergency services were identified.

5.10.2 Police Protection

The information in this subsection is based partly on written responses to a questionnaire provided by Mark Bevens, Commander, Kings County Sherriff's Office dated October 4, 2019. A copy of the questionnaire is included in Appendix F of this DEIR.

5.10.2.1 ENVIRONMENTAL SETTING

Regulatory Background

Local laws, regulations, plans, or guidelines related to police protection services that are applicable to the Specific Plan are summarized below.

Kings County Adopted Public Facility Impact Fees

Per the Kings County General Plan Land Use Element, applicants of future development projects (both residential and nonresidential) in the County are required to pay Public Facility Impact Fees established by Kings County Ordinance 633. The established impact fees are allocated to specific uses for Countywide protection and public services including public protection, police, and fire (Kings County 2010). The purpose of the impact fee is to ensure that new development finances its fair share of public facilities and services needed to serve the County.

Existing Conditions

Law enforcement service for the Plan Area is provided by the Kings County Sheriff's Office (KCSO). While KCSO provides general law enforcement services to the Plan Area, the California Highway Patrol (CHP) is the primary agency that provides traffic law enforcement, safety, and management services within the portion of unincorporated Kings County that includes the Plan Area.

Stations, Staffing, and Equipment

KCSO consists of several divisions and units such as: Boating Enforcement Unit; Civil Division; Communications Division; Coroner's Office; Dive Team; Detectives; Internal Affairs Unit; Off-Road Enforcement Team; Records Division; and Rural Crimes, Narcotics, and Gang Task Forces. KCSO is equipped with patrol vehicles, a K-9 unit, and a SWAT unit (KCSO 2019).

The two KCSO stations closest to the Plan Area are the substation at 85 Brown Street in Kettleman City (operates out of KCFD Station No. 9), approximately 6 miles northwest of the Plan Area, and the headquarters at 1444 W. Lacey Boulevard in Hanford, approximately 35 miles northeast of the Plan Area. The Kettleman City substation is equipped with 5 patrol vehicles and 1 staff member on any given day. The KCSO headquarters is equipped with 42 patrol vehicles at full staff and 13 staff members at full staff on a given day. At headquarters, 4 of the 13 staff are school resource deputies and 9 are assigned to patrol (Bevens 2019).

The Plan Area is in the Coalinga Area of CHP, which is comprised of 24 patrol officers and a shared communications center at 1380 E. Fortune Avenue in Fresno, approximately 56 miles northeast of the Plan Area. The communications center supports four geographically separate area offices throughout the San Joaquin Valley (Brunnell 2019). In the Coalinga Area, CHP operates out of the station at 125 S. 6th Street in Coalinga, approximately 30 miles northwest of the Plan Area.

Performance Standards

KCSO's response time is the time between receipt of a service call and the on-scene arrival of a patrol officer and varies depending on the urgency of the call. KCSO strives to be on scene as soon as safely practical for all calls for service. The average emergency call response time is 10:22 minutes for priority one calls and 13:04 minutes for priority two calls (KCSO 2019).

Funding

Funding for KCSO's operations and maintenance comes primarily from the County's General Fund (Bevens 2019). In addition, per the Kings County General Plan Land Use Element, applicants of future development projects (both residential and nonresidential) in the County are required to pay Public Facility Impact Fees established by Kings County Ordinance 633. The established impact fees are allocated to specific uses for Countywide protection and public services including public protection and sheriff patrol and investigation (Kings County 2010). The purpose of the impact fee is to ensure that new development finances its fair share of public facilities and services needed to serve the County. Adopted fees pursuant to Kings County Ordinance 633 and effective as of October 2018 are detailed in Table 5.10-4.

Table 5.10-4 Kings County Law Enforcement Impact Fees (Effective October 2018)

Land Use Type	Public Protection Fee	Sheriff Patrol and Investigation Fee
Residential		
Single-Family	$1,148 per unit	$332 per unit
Multifamily	$918 per unit	$266 per unit
Non-Residential		
Retail	$360 per unit	$104 per unit
Office	$450 per unit	$130 per unit
Industrial	$270 per unit	$78 per unit

Source: Kings County 2018.

5.10.2.2 THRESHOLDS OF SIGNIFICANCE

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

PP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

5.10.2.3 ENVIRONMENTAL IMPACTS

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

Impact 5.10-2: Implementation of the Specific Plan would introduce new structures, workers, and visitors into the Kings County Sherriff's Office and California Highway Patrol service areas/boundaries, thereby increasing the requirement for police protection services. [Threshold PP-1]

Impact Analysis: Following is a discussion of the potential impacts to police protection services as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Implementation of the Specific Plan would result in an increase in the overall demand on police protection services in the Plan Area and its surroundings, including along state highway facilities. The introduction of new structures, workers and visitors in the Plan Area would result in additional calls for law enforcement

services, which could increase needs for KCSO staffing, facilities, and equipment. Additionally, the increased traffic to the area would change traffic congestion patterns and may increase the likelihood of traffic collisions and other roadway-related incidents, which would generate additional demand for staffing and equipment for CHP (Brunnell 2019).

However, implementation of the Specific Plan is not anticipated to have a significant impact on police protection services for either KCSO or CHP. KCSO would respond to any public safety incidents in the Plan Area within the expected range of response times, which is an average response time of 10:22 minutes for Priority One calls and 13:04 minutes or more for Priority Two calls (Bevens 2019). Specific Plan implementation would also not impede CHP from continuing to adequately patrol all state highway facilities serving the Plan Area, including Interstate 5.

Additionally, considering the existing police resources that serve the Plan Area and its surroundings, project impacts on police protection services (including response times) are not expected to occur. It is anticipated that KCSO's staffing and equipment levels could absorb the additional calls and responses that could be generated by development that would be accommodated by the Specific Plan. Also, although unlikely, in the event of an emergency in the Plan Area that requires more resources than KCSO could provide from its, KCSO would request assistance from CHP.

Furthermore, the potential demand for additional KCSO personnel, equipment, and operational costs generated by the Specific Plan would be funded and offset through the County's General Fund. Individual development projects would be reviewed by the County and KCSO and be required to comply with the requirements in effect at the time building permits are issued, including the payment of Public Facility Impact Fees related to police protection facilities established in Kings County Ordinance 633 (see Table 5.10-4, *Kings County Law Enforcement Impact Fees (Effective October 2018)*). Fees collected under this ordinance are utilized for payment of the actual or estimated costs of police facilities, apparatus, and equipment related to new nonresidential construction in the County. Payment of these fees ensures that individual project applicants pay their fair share of costs related to police protection services and facilities.

Finally, the County involves KCSO in the development review and permitting process in order to ensure that the necessary police protection features are incorporated into development projects. All site and building improvements of development projects that would be accommodated by the Specific Plan would be subject to review and approval by KCSO. More specific consideration of police protection services and any desired augmentation to achieve best performance goals set forth by KCSO, such as project design features to improve security in the Plan Area, may be considered as part of the County's development review process.

Based on the preceding, implementation of the Specific Plan would not adversely affect KCSO's or CHP's ability to provide adequate police protection services and would not require new or expanded police facilities that could result in adverse environmental impacts.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as

Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, implementation of the Specific Plan would not adversely affect KCSO's or CHP's ability to provide adequate police protection services and would not require new or expanded police facilities that could result in adverse environmental impacts.

Specific Plan – Offsite Water Infrastructure Improvements

As described above, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The water main would stretch along this roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Implementation of the offsite water main improvements would not directly or indirectly impact police protection services. The 25th Avenue roadway right-of-way is fully disturbed and consists of pavement and some areas of compacted soil. The roadway would continue to serve as an alternative means of emergency access to the Plan Area, with primary and more direct and quicker access being provided via Interstate 5. Therefore, implementation of the offsite water infrastructure improvements would not adversely affect KCSO's ability to provide adequate police protection services and would not require new or expanded fire facilities that could result in adverse environmental impacts.

5.10.2.4 CUMULATIVE IMPACTS

The methodology used for the cumulative impact analysis is described in Chapter 4.0, Environmental Setting, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. However, implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in a cumulative impact to police protection services.

However, other development projects in the County would be required to undergo discretionary review and would be subject to the same CEQA review as the Specific Plan. Additionally, as with the Specific Plan, other development projects in the County would be reviewed by the County and KCSO to comply with the requirements in effect at the time building permits are issued, including the payment of Public Facility Impact Fees related to fire facilities established in Kings County Ordinance 633. KCSO would also review and approve other development projects to ensure that adequate police protection features are provided to serve the needs of KCSO. Furthermore, Finally, a periodic review process conducted by KCSO and CHP would ensure that adequate service would be maintained throughout the County and would add staffing and equipment as deemed necessary.

In consideration of the preceding, the Specific Plan's contribution to cumulative police protections service impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.10.2.5 EXISTING REGULATIONS

The following laws, regulations, plans, or guidelines pertain to police protection services apply to the Specific Plan and are described in detail in Section 5.10.2.1, *Environmental Setting*, above.

- Kings County Ordinance 633

5.10.2.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impact would be less than significant: 5.10-2.

5.10.2.7 MITIGATION MEASURES

No significant adverse impacts related to police protection services were identified and no mitigation measures are necessary.

5.10.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant adverse impacts related to police protection services were identified.

5.10.3 References

Bevens, Mark (commander). 2019, October 4. Written response to questionnaire. Kings County Sheriff's Office.

Brunell, R. M. (commander, Coalinga Area). 2019, September 26. Comment letter on Notice of Preparation. California Highway Patrol.

California Department of Forestry and Fire Prevention (CAL FIRE). 2019, January 25. FHSZ Viewer. http://egis.fire.ca.gov/FHSZ/.

Kings County. 2018, October. Adopted Public Facilities Impact Fees (effective October 2018) per County Ordinance 633. https://www.countyofkings.com/home/showdocument?id=19373.

Kings County Community Development Agency. 2010, January 26. Land Use Element. In 2035 General Plan. https://www.countyofkings.com/home/showdocument?id=15995.

Kings County Fire Department (KCFD). 2019, September 13. Kings County Fire Stations. https://www.countyofkings.com/departments/fire-department/fire-stations.

Kings County Sheriff's Office (KCSO). 2019, November 1. Kings County Sheriff's Office. https://www.countyofkings.com/departments/public-safety/sheriff.

Levy, Rick (fire marshal). 2019, October 8. Written response to questionnaire. Kings County Fire Department.

5.11 TRANSPORTATION

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Jackson Ranch Specific Plan (Specific Plan) to result in transportation and traffic impacts in the area covered by the Specific Plan (Plan Area) and pertinent areas of Kings County. The analysis in this section is based in part on the following technical reports:

- *Traffic Impact Analysis Technical Report*, Kittelson & Associates, Inc., March 2020 (Appendix G1)
- *VMT Analysis Memorandum,* Kittelson & Associates, Inc., April 2020 (Appendix G2)

A complete copy of these technical reports is included in Appendices G1 and G2 of this DEIR.

5.11.1 Environmental Setting

5.11.1.1 REGULATORY BACKGROUND

State and local laws, regulations, plans, or guidelines related to transportation that are applicable to the Specific Plan are summarized below.

State

Senate Bill 743

On September 27, 2013, Senate Bill 743 (SB 743) was signed into law, starting a process that fundamentally changed transportation impact analysis as part of CEQA compliance. The legislature found that with the adoption of SB 375, the State of California had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of GHG emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32).

SB 743 eliminates auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as the sole basis for determining significant impacts under CEQA. Pursuant to the CEQA Guidelines, the new criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code Section 21099(b)(1)).

Pursuant to SB 743, the Natural Resources Agency adopted revisions to the CEQA Guidelines to implement SB 743 on December 28, 2018. The revised CEQA Guidelines establish new criteria for determining the significance of transportation impacts. Under the new guidelines, VMT-related metric(s) that evaluate the significance of transportation-related impacts under CEQA for development projects, land use plans, and transportation infrastructure projects are required beginning on July 1, 2020. The legislation does not preclude the application of local general plan policies, zoning codes, conditions of approval, or any other planning requirements that require evaluation of LOS, but these metrics may no longer constitute the sole basis for determining transportation impacts under CEQA.

California Department of Transportation

Intersections within incorporated cities associated with freeway on- and off-ramps fall under the California Department of Transportation (Caltrans) jurisdiction. Caltrans targets a minimum acceptable LOS at the transition between LOS "C" and LOS "D," as discussed in Caltrans' Guide for the Preparation of Traffic Impact Studies (Caltrans 2002). For intersection analysis, this limit is the equivalent of having a delay of about 35 seconds per vehicle using the Highway Capacity Manual (HCM) methodology. Caltrans and unincorporated Kings County require use of the HCM methodology for the analysis of traffic conditions. As part of Caltrans' system planning process, the agency completes the Transportation Concept Report (TCR), a long-range system-planning document that assesses future conditions and needs of state highway corridors. The document establishes future planning concept characteristics for routes, traffic data, and operations. Per the TCR, for each segment in the project area, the long-range concept LOS is "C."

It shall be noted that Caltrans is currently updating its Guide for the Preparation of Traffic Impact Studies to include metrics to evaluate transportation impacts based on vehicle miles traveled (VMT). The new guidelines are anticipated to be finalized and adopted in the Spring or Summer of 2020.

Local

Kings County Association of Governments

The Kings County Association of Governments serves as the region's Metropolitan Planning Organization and the Regional Transportation Planning Agency (RTPA). KCAG develops a Regional Traffic Model (Model) and a comprehensive long-range Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS document is updated every four years and outlines Transportation System and Performance Management programs for transportation improvements. In August 2018, KCAG adopted its 2018 RTP/SCS, which covers the period from 2018 to 2042. KCAG, as an MPO, is required to integrate a Congestion Management Program (CMP) as part of the MPO's planning process; however, KCAG is not a Transportation Management Agency (TMA) and according to its 2018 RTP/SCS opted not to participate in the CMP required by California Government Code Section 65089(b). California Assembly Bill 2419 allows jurisdictions to "opt out" of the CMP without the risk of losing transportation funding if the local governments elected to exempt themselves. Because KCAG opted out of the CMP requirement, the congestion management process is only relevant for federal requirements and funding, but not at the state, regional, and local levels. Therefore, the congestion management program or congestion management agency standards do not apply to Kings County.

Kings County

The 2035 Kings County General Plan discusses goals, policies, and implementation actions that determine development and mobility within the region; the General Plan's Circulation Element provides LOS thresholds for roadway types in the county. During peak hours, LOS standard "D" is the threshold for acceptable traffic operations for the county's roadways.

The Circulation Element further provides goals and policies regarding pedestrian facilities. The following is an objective relating to pedestrian facilities that would apply to the Specific Plan:

- **C Objective B1.2:** Enhance pedestrian/bicycle access and safety through traffic calming street design measures and bicycle rack integration into new commercial structures.

5.11.1.2 EXISTING ROADWAY NETWORK

Study-area roadways serving the Plan Area are described in the Circulation Element of the 2035 Kings County General Plan. Figure 5.11-1, *Study Corridors and Circulation Network*, shows the roadway extents and classifications that are needed to adequately implement the roadway network depicted in the General Plan Circulation Element and the KCAG 2018 RTP/SCS for the County's long-range buildout conditions.

The roadways in the study area and shown in Figure 5.11-1 are described below and considered "Routes of Regional Significance" in the 2018 Kings County Regional Transportation Plan and KCAG's 2018 RTP/SCS.

- **Interstate 5 (Kern Co. to Fresno Co.).** Currently, Interstate 5 (I-5) is a four-lane divided freeway with two travel lanes in each direction. I-5 is the most traveled roadway in the County. Approximately 30 percent of traffic are trucks. The City of Avenal and the community of Kettleman City are located near I-5 and are directly impacted by this freeway with highway-commercial type land uses.

- **State Route 41 (Kern County to Fresno County).** State Route (SR) 41 operates as a rural highway; in the vicinity of the Plan Area, the highway is a two-lane divided route with one lane traveling in each direction. Once SR-41 approaches I-5, the highway converts into a four-lane highway with two travel lanes in each direction. SR-41 has approximately 6,700 daily trips near I-5.

- **Utica Avenue.** This east-west roadway currently has two lanes and is classified as a Major Collector in the Kings County Circulation Element. It is currently developed from 6th Avenue to I-5 and SR 41 to SR 33. The roadway has no bikeways or pedestrian infrastructure. Traffic is stop controlled.

- **25th Avenue.** This north-south roadway currently has two lanes and is classified as a Major Collector in the Kings County Circulation Element. The roadway is developed from I-5 to Kern County. The roadway has no bikeways or pedestrian infrastructure. Traffic is stop controlled.

Study Area Intersections

The following roadway and freeway interchanges (see Figure 5.11-2, *Study Area Intersections*) were analyzed based on preliminary trip distribution estimates.

1. Southbound I-5 at SR-41 Ramps
2. Northbound I-5 at SR-41 Ramps
3. Bernard Drive at SR-41
4. 25th Avenue at SR-41
5. Utica Avenue at 25th Avenue
6. Utica Avenue at Southbound I-5 Ramp

7. Utica Avenue at Northbound I-5 Ramp
8. Utica Avenue at Frontage Road

Intersections 1 through 7 are under the jurisdiction of Caltrans; intersections 5 and 8 are under the jurisdiction of Kings County.

Study Roadway Segments

The following roadway segments were analyzed in the TIA (see Figure 5.11-1):

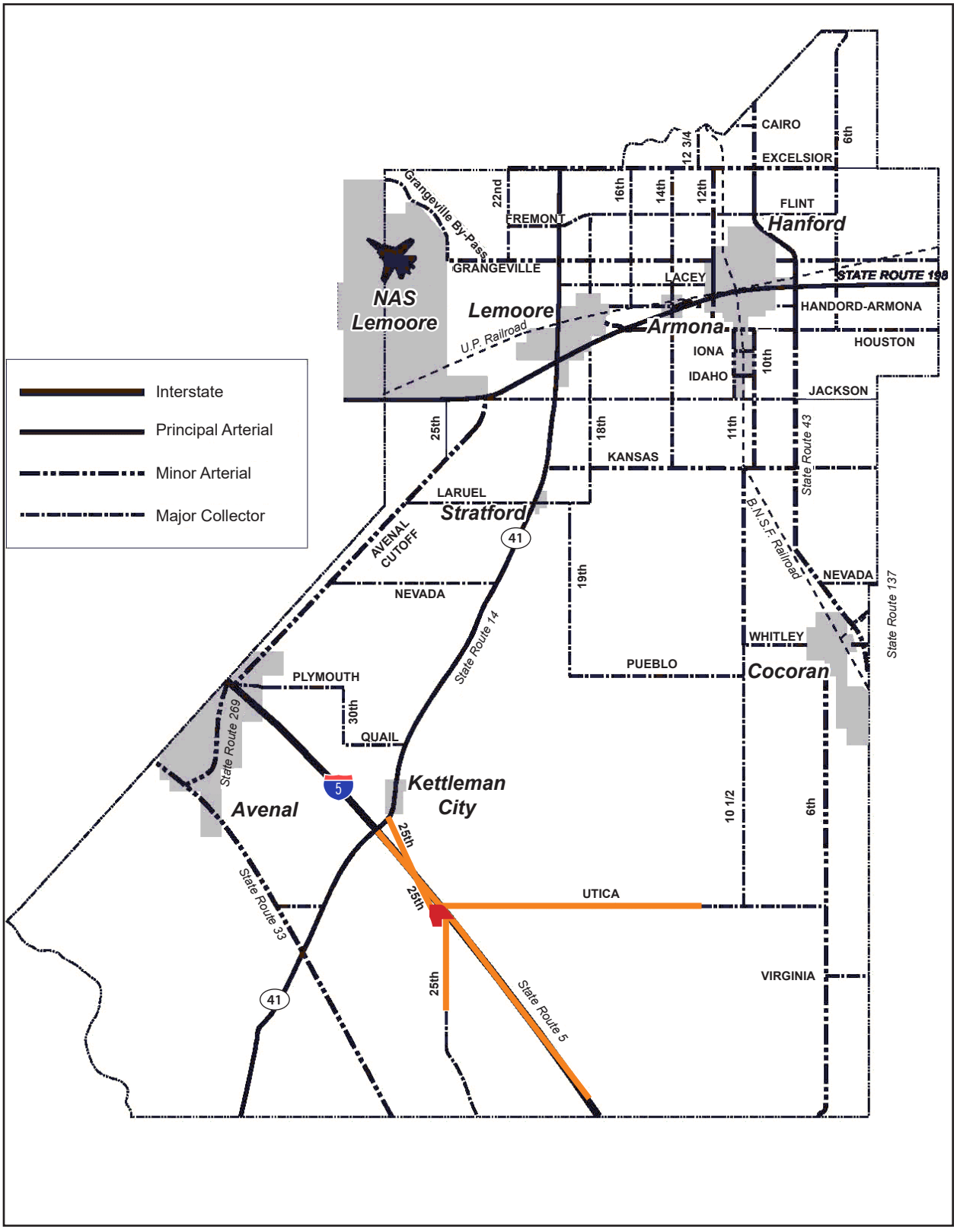
- Utica Avenue west of 25th Avenue (south leg)
- Utica Avenue between Plan Area access eastern driveway and I- 5 southbound ramps
- Utica Avenue between I- 5 southbound ramps and I- 5 northbound ramps
- Utica Avenue between I- 5 northbound ramps and Frontage Road
- Utica Avenue east of Frontage Road
- 25th Avenue south of Utica Avenue

Study Freeway Segments

The following freeway segments and ramps were analyzed in the TIA:

- Main-line LOS and merge/diverge (each direction North/South, East/West):
  - I-5 Freeway south of Utica Avenue
  - I-5 Freeway between Utica Avenue and SR-41
  - I-5 Freeway north of SR-41
- Freeway ramps queuing and capacity:
  - I-5 northbound at Utica Avenue
  - I-5 southbound at Utica Avenue
  - I-5 northbound off-ramp at SR-41
  - I-5 on-ramp at SR-41

Figure 5.11-1 - Study Corridors and Circulation Network
5. Environmental Analysis



Project Boundary
Study Corridors

0 7.5
Scale (Miles)

Source: 2035 Kings County General Plan Circulation Element

5. Environmental Analysis
TRANSPORTATION

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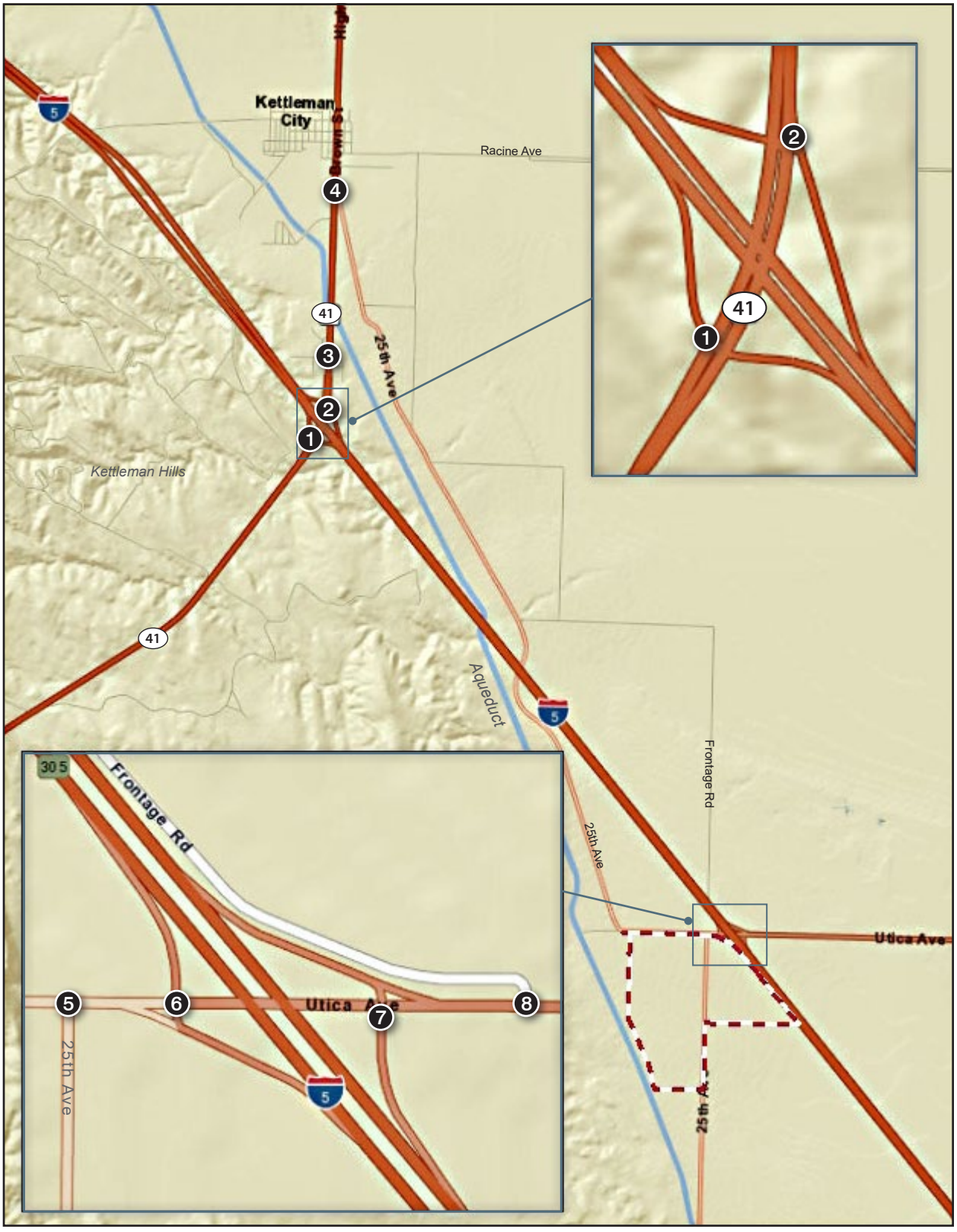
Figure 5.11-2 - Study Area Intersections
5. Environmental Analysis



Project Boundary

Intersection Location Number

0 1
Scale (Miles)

Source: ESRI, 2019

5. Environmental Analysis
TRANSPORTATION

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5.11.1.3 EXISTING TRAFFIC CONDITIONS

Level of Service

The intersection level of service (LOS) analysis is based on the traffic volumes observed during morning and evening peak hour conditions from 7 to 9 AM and from 4 to 6 PM, respectively, on typical weekdays pursuant to Kings County, and between 2 to 6 PM on Fridays pursuant to Caltrans. In conformance with the Kings County and Caltrans requirements, existing peak hour operating conditions for the study area intersections were evaluated using the Highway Capacity Manual 6th Edition (HCM). Per the HCM methodology, the overall weighted average delay will be calculated at signalized and all-way-stop intersections, and the worst-case approach delay were calculated at two-way stop-controlled intersections. The LOS corresponds to the calculated delay. The Traffic Impact Analysis (TIA) prepared for the Specific Plan was conducted in conjunction with Kings County and Caltrans District 6 office. A traffic memorandum of understanding of the proposed methodology was prepared in coordination with and reviewed by Kings County and Caltrans (Appendix G1).

Definition of Level of Service

Roadway capacity is generally limited by the ability to move vehicles through intersections. A level of service is a standard performance measurement to describe the operating characteristics of a street system in terms of the level of congestion or delay experienced by motorists. Service levels range from A through F, which relate to traffic conditions from best (uncongested, free-flowing conditions) to worst (total breakdown with stop-and-go operation). Table 5.11-1 provides LOS criteria for urban and rural freeway facilities; given that the I-5 and SR-41 segments within the study area are in a rural designation per Caltrans D6's Transportation Concept Reports, the rural LOS criteria is applicable.

Table 5.11-1 Level of Surface Criteria for Urban and Rural Freeway Facilities

	Freeway Facility Density (pc/mi/ln)	
LOS	**Urban**	**Rural**
A	≤11	≤6
B	>11–18	>6–14
C	>18-26	>14-22
D	>26-35	>22-29
E	>35-45	>29-39
F	>45 or any component segment v_d/c ratio > 1.00	>39 or any component segment v_d/c ratio > 1.00

Source: Kittelson 2020a.
Notes: pc/mi/ln = passenger cars per mile per lane

Intersection Level of Service

The methodology used to assess the operation of a signalized intersection is based on the HCM (6th Edition) during the traffic peak hours. The peak hours selected for analysis are the highest volumes that occur in four consecutive 15-minute periods from 7 to 9 AM and from 4 to 6 PM on weekdays. Per the HCM

methodology, overall average intersection delay at signalized intersections was calculated, and the worst-case approach delay was calculated at unsignalized intersections. The level of service corresponds to the delay calculated in seconds per vehicle. Table 5.11-2 describes the level of service concept and the operating conditions expected under each level of service for signalized and unsignalized intersections. The PTV Vistro software was used to determine the LOS at the study area intersections.

Table 5.11-2 Intersection Level of Service

Level of Service	Description	Average Delay Per Vehicle (seconds)	
		Signalized	Unsignalized
A	Free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream.	≤10	0-10
B	Reasonable unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted, and control delay at the boundary intersections is not significant.	>10–20	>10–15
C	Stable operation. The ability to maneuver and change lanes at midsegment locations may be more restricted than at LOS B.	>20–35	>15–25
D	Less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speeds.	>35–55	>25–35
E	Unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections.	>55–80	>35–50
F	Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing.	>80	>50

Source Kittelson 2020a.
Notes: If volumes to capacity (V/C) ratio is greater than 1.0 for the operation of a signalized or unsignalized intersection, the LOS is F regardless of the delay value.

Roadway Segment Level of Service

To evaluate roadway segment operations, daily traffic LOS thresholds were obtained from the 2035 Kings County General Plan Circulation Element, which are reproduced in Table 5.11-3. The roadway threshold for a two-lane road is 16,400 vehicles per day for a LOS of "D". Average annual daily traffic on roadway segments was calculated by multiplying the intersection PM peak hour volumes by a peak to daily factor of 10, according to a review of the roadway counts taken on Utica Avenue. The volume per capacity ratio (v/c) was obtained by dividing the traffic volume by the roadway capacity on that segment.

Table 5.11-3 Kings County Level of Service Threshold Volumes

Roadway Type	Total Daily Vehicles in Both Directions (ADT)				
	LOS A	LOS B	LOS C	LOS D	LOS E
6-Lane Freeway	36,900	61,100	85,300	103,600	115,300
4-Lane Freeway	23,800	39,600	55,200	67,100	74,600
6-Lane Arterial	7,300	44,700	52,100	53,500	—
4-Lane Arterial (turn lanes)	4,800	29,300	34,700	35,700	—
4-Lane Collector	2,400	14,650	17,350	17,850	—
2-Lane Facility	—	4,200	13,800	16,400	16,900

Source: 2035 Kings County General Plan Circulation Element

Freeway Level of Service

The freeway segments were analyzed for the basic, and merge/diverge components where capacity constraints typically occur on the freeway system. For this analysis, the freeway segments were analyzed for each direction (northbound/southbound) for each segment between interchanges. The analysis was performed utilizing the HCM 6th Edition methodology; the software HCS 7 was used to determine the LOS for all Freeway facilities. The LOS for each segment identified below is defined on the basis of density (passenger cars/mile/lane). Table 5.11-4 presents the LOS criteria for basic freeway analysis. The LOS for merging and diverging freeway segments are based on density, expressed in vehicles per mile per lane (pc/mi/ln). Table 5.11-5 provides the LOS criteria for merge and diverge segments.

Table 5.11-4 Level of Service Criteria for Basic Freeway and Multilane Highway Segments

LOS	Density (pc/mi/ln)
A	≤11
B	>11–18
C	>18–26
D	>26–35
E	>35–45
F	Demand exceeds capacity OR density >45

Source: Kittelson 2020a.
Notes: pc/mi/ln = passenger cars per mile per lane

Table 5.11-5 Level of Service Criteria for Freeway Merge/Diverge

LOS	Description	Density (pc/mi/ln) Merge/Diverge
A	Unrestricted operations	≤10
B	Merging and diverging maneuvers noticeable to drivers	>10-20
C	Influence area speeds begin to decline	>20-28
D	Influence area turbulence becomes intrusive	>28–35
E	Turbulence felt by virtually all drivers	>35
F	Ramp and freeway queues form	Demand exceeds capacity

Notes: pc/mi/ln = passenger cars per mile per lane
Source: Kittelson 2020a.

Existing Traffic Volumes

Weekday AM and PM peak hour and Friday afternoon peak hour turn movement volumes were collected at the study-area intersections. The counts were collected in December 2019. Traffic count worksheet and the existing turn-movement volumes are presented in Appendix B and in Figure 8, Figure 9, and Figure 10 of the TIA (Appendix G1).

Existing Conditions Roadway Segments Analysis

Weekday and Friday daily volumes on roadways were evaluated for the County roadway segments per Kings County requirements. The TIA found that all roadway segments operate at an acceptable LOS (all at a LOS B) at daily level for existing conditions. The roadway daily volumes and corresponding LOS are summarized in Table 6 of the TIA (Appendix G1).

Existing Conditions Intersection Operations Analysis

The intersection operations analysis results are summarized in Table 5.11-6. LOS calculation worksheets for existing conditions are included in Appendix C of the TIA (Appendix G1). As shown in the Table 5.11-6, all study area intersections currently operate at acceptable LOS during the peak hours for Existing traffic conditions.

Table 5.11-6 Existing Peak Hour Intersection Levels of Service

Intersection	Traffic Control	Jurisdiction	AM Peak Hour		PM Peak Hour		Friday Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Southbound 1-5 at SR-41 Ramps	Signal	Caltrans	16.7	B	15.7	B	15.9	B
2. Northbound I-5 at SR-41 Ramps	TWSC	Caltrans	9.9	A	10.0	A	10.9	B
3. Bernard Drive at SR-41	Signal	Caltrans	29.0	C	21.8	C	26.7	C
4. 25th Avenue at SR-41	TWSC	Caltrans	9.6	A	10.4	B	10.5	B
5. Utica Avenue at 25th Avenue	TWSC	County	8.8	A	8.7	A	9.1	A
6. Utica Avenue at Southbound I-5 Ramp	TWSC	Caltrans	9.0	A	9.1	A	9.4	A
7. Utica Avenue at Northbound I-5 Ramp	TWSC	Caltrans	9.4	A	9.3	A	9.2	A
8. Utica Avenue at Frontage Road	TWSC	County	0.0	A	9.0	A	8.6	A

Source: Kittelson 2020a.
Notes: TWSC = Two-way Stop Controlled

Freeway Operations

Freeway Mainline and Merge/Diverge

Table 5.11-7 summarizes the densities and corresponding LOS used for this analysis. Existing traffic volumes on the freeway mainline were obtained by Caltrans' Performance Measurement System (PeMS) presented in Appendix D of the TIA (Appendix G1).

The Freeway LOS calculation worksheets performed with HCS are presented in Appendix E of the TIA (Appendix G1). As shown in Table 5.11-7, all freeway facilities operate within acceptable LOS, which is LOS C, under existing conditions.

Table 5.11-7 Freeway Mainline and Merge/Diverge Peak Hour Levels of Service

Segment/Ramp	Type	Mainline Lanes	AM Peak Hour		PM Peak Hour		Friday Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-5 Northbound								
South of Utica Avenue	Basic	2	8.2	A	10.9	A	15.3	B
Utica Avenue On-Ramp	Merge	1	8.6	B	12.9	B	17.8	B
Between Utica Avenue to SR-41	Basic	2	8.2	A	10.9	A	15.3	B
SR-41 Off-Ramp	Diverge	1	9.2	B	13.7	B	18.2	C
North of SR-41	Basic	2	8.3	A	10.7	A	15.4	B
I-5 Southbound								
South of Utica Avenue	Basic	2	7.3	A	11.0	A	14.5	B
Utica Avenue Off-Ramp	Diverge	1	10.1	B	13.5	B	19.0	C
Between Utica Avenue to SR-41	Basic	2	7.3	A	10.9	A	14.5	B
SR-41 On-Ramp	Merge	1	10.4	B	13.7	B	19.5	C
North of SR-41	Basic	2	7.2	A	11.0	A	15.1	B

Source: Kittelson 2020a.

Off-Ramp Queues

All ramps operate at acceptable LOS and there are currently no queues on the I-5 northbound and southbound off-ramps at Utica Avenue. The longest queue occurs at the I-5 southbound ramps at SR-41 with a 95th percentile queue length of two vehicles.

Transit Service and Non-Motorized Circulation

The Kings Area Rural Transit provides regular transit service via Route 12 in Kettleman City, an unincorporated community of the County approximately 6 miles to the northwest (see Figure 3-1, *Regional Location*). Currently the nearest bus stop is located on Becky Pease Street at Standard Oil Avenue, approximate 2 miles from Intersection #2 of the study area and over 6 miles from the Plan Area. As shown in Figure 3-4, *Aerial Photograph*, there are currently no pedestrian or bicycle facilities or improvements in or near the Plan Area.

5.11.2 Thresholds of Significance

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

T-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

T-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

T-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

T-4 Result in inadequate emergency access.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold T-3
- Threshold T-4

These impacts will not be addressed in the following analysis.

5.11.2.1 ACCEPTABLE LOS AND THRESHOLDS OF SIGNIFICANCE

The study area intersections are within the jurisdictions of Kings County and Caltrans (five intersections are unsignalized).

For intersections, the impact would be considered significant if:

- Project traffic would cause the LOS at an intersection to degrade from LOS D or better to LOS E or F.
- Project traffic would increase delay by more than 2.0 seconds at an intersection operating at LOS E or F under no project conditions.

The TIA evaluated unsignalized intersections to identify excessive delays and queues and to determine the need for the installation of a traffic signal or other traffic control devices. Signal warrants are a set of criteria used to evaluate the potential need for a traffic signal at an unsignalized or stop-controlled intersection. The methodology for the signal warrant analysis is included in the California Manual on Uniform Traffic Control Devices. The manual states that if one or more of the criteria for signal warrants is met, an engineering study is required to evaluate other factors to determine if an intersection must be signalized. The TIA used Warrant 3 criteria, which are based on traffic volumes entering the intersection during the peak hour.

For freeway segments, the impact would be considered significant if:

- Project traffic would contribute to trips in a freeway segment where the segment is anticipated to operate at a LOS worse than the target LOS. For the freeway segments in the study area the target LOS is C.

5.11.2.2 VMT THRESHOLDS OF SIGNIFICANCE

CEQA Guidelines Section 15064.3 describes how transportation impacts are to be analyzed under SB 743. It states that in general transportation impacts are best measured by evaluating a project's vehicle miles traveled. For land use projects, VMT exceeding an applicable threshold of significance may indicate a significant impact. There are several key elements for implementing SB 743-compliant standards for land use projects. The County, which is the lead agency processing the Specific Plan under CEQA has not yet adopted VMT methodologies and thresholds to evaluate projects. The County has until July 1, 2020 to adopt the guidelines and VMT-cased criteria to evaluate potential transportation impacts related to the development of land use

projects. Currently Kings County relies on roadway capacity and LOS to evaluate transportation impacts under CEQA.

5.11.2.3 SPECIFIC PLAN TRAFFIC METHODOLOGY

Trip Generation

Under the Specific Plan, the Plan Area would develop with a mix of innovative service and commercial use, including hospitality services, restaurants, a truck stop, employment centers, and distribution/logistics centers. The trip generation was calculated based on rates in the ITE Trip Generation Manual (10th edition) for the corresponding land uses. Table 9 of the TIA (Appendix G1) shows the land uses referenced to develop the Specific Plan trip generation for weekdays.

Weekday Trip Generation

Table 9 and Table 10 of the TIA show the trip generation rates, daily rates, and trip generation for non-Friday weekday AM and PM peak hours. The usual approach for conducting traffic impact analyses is to evaluate weekday peak hour traffic during the commute peak traffic conditions that generally occur from 7 to 9 AM and 4 to 6 PM on weekdays, when traffic conditions are generally worse.

The TIA evaluated impacts for the Phase One Buildout (2023) and Plan Area Buildout (2040) traffic conditions of the Specific Plan. For the purpose of calculating internal trip captures, retail trips include trips to multiple retail services, including the gas stations, as several patrons that normally fuel also go to restaurants when they stop at highway commercial and service developments. Because the National Cooperative Highway Research Program 684 methodology does not calculate daily trip capture rates, the capture rates for the AM peak hour, which are less than the PM rates, were utilized.

Table 11 through Table 14 of the TIA (Appendix G1) show the weekday external trips and net trip generations for Phase One Buildout (2023) and Plan Area Buildout (2040) traffic conditions. Table 11 shows the total external trips with Phase One of the Specific Plan (including credits due to internal capture). Table 12 shows the net total new trips for Phase One Buildout (2023) by taking into account pass-by trip reductions. Table 13 and Table 14 show the weekday trip generation for Plan Area Buildout (2040) for total trips and new trips.

The TIA assumes that the Phase One of the Specific Plan would generate 356 trips (181 inbound and 176 outbound) during the weekday AM peak hour; and 408 trips (212 inbound and 196 outbound) during the weekday PM peak hour in the Phase One Buildout (2023) traffic scenario. For the Plan Area Buildout (2040) scenario, the new and pass-by trips would generate 811 trips (565 inbound and 246 outbound) during the weekday AM peak hour; and 866 trips (298 inbound and 568 outbound) during the weekday PM peak hour.

Friday Trip Generation

The usual approach for conducting traffic impact analyses is to evaluate weekday peak hour traffic during the commute peak traffic conditions that generally occur from 7 to 9 AM and 4 to 6 PM on weekdays, when traffic conditions are generally worse. However, due to traffic patterns in the region along I-5, Friday

afternoons represent the highest traffic volumes. Caltrans requested a separate analysis for the Friday peak hour conditions, which occur in the Friday afternoon period. Table 15 in the TIA (Appendix G1) shows the trip generation rates, daily rates, and trip generation for the Friday peak hour.

Table 16 through Table 19 of the TIA (Appendix G1) show the Friday external trips and net trip generations for Phase One Buildout (2023) and Plan Area Buildout (2040) traffic conditions. Table 16 shows the total external Friday trips with Phase One Buildout (2023)(including credits due to internal capture). Table 17 shows the net total new trips on Fridays by taking into account pass-by trip reductions. As shown in Table 17, the analysis assumed that the Phase One Buildout (2023) would generate 515 trips (268 inbound and 247 outbound) during the Friday peak hour in interim year 2023 condition. For the Plan Area Buildout (2040), the new and pass-by trips would generate 974 trips (354 inbound and 619 outbound) during the Friday peak hour, as shown in Table 19.

Trip Distribution

The traffic that would be generated by the Specific Plan was geographically distributed onto the highway and street network by evaluating the layout of the study area roadway network and a review of land uses designated as commercial in the area. Figure 11 and Figure 12 in the TIA (Appendix G1) present the anticipated trip distribution for the Specific Plan.

The trip distribution for the proposed access driveways was assigned according to the anticipated traffic patterns in the region and the location of the Plan Area. For non-pass-by trips, it is assumed that 50 percent of trips would utilize I-5, 40 percent would utilize SR-41, and 10 percent would utilize Utica Avenue. For pass-by trips, it is assumed that 90 percent would utilize I-5 and 10 percent would utilize SR-41.

Trip Assignment

The trip distribution percentages are applied to the Specific Plan trip generation to determine the traffic volumes forecast to be added at each study area intersection (i.e., trip assignment).

5.11.3 Environmental Impacts

5.11.3.1 IMPACT ANALYSIS

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

Impact 5.11-1: Implementation of the Specific Plan would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. [Threshold T-1]

Impact Analysis. Following is a discussion of the potential transportation impacts as a result of development that would be accommodated by the Specific Plan. This section evaluates the Specific Plan's traffic for two future scenarios—Phase One Buildout (2023) and Plan Area Buildout (2040). Signal warrant analysis, site access and transit, pedestrian and bicycle facilities are also evaluated.

The following analysis also considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Estimating Future Baseline Traffic Conditions

Ambient growth was added to existing traffic volumes at study area facilities to estimate no Specific Plan conditions under the Phase One Buildout (2023) and Plan Area Buildout (2040) traffic scenarios. Kings County was consulted to review potential cumulative projects within a five-mile radius of the Plan Area; however, at the time of the release of the Notice of Preparation and preparation of this TIA, no cumulative projects were identified.

Traffic forecasts for the Phase One Buildout (2023) traffic conditions were based upon four years of ambient growth at 2 percent per year, for a total increase of approximately 8.2 percent from existing traffic counts. Traffic forecasts for the Plan Area Buildout (2040) traffic conditions were based on 21 years of ambient growth at 2 percent per year, for a total increase of approximately 51.6 percent from existing traffic counts.

Plan Area Buildout (2040) Traffic Conditions without the Specific Plan

Intersections

The intersection operations for the Plan Area Buildout (2040) traffic conditions without the Specific Plan are provided in Table 5.11-8. It should be noted that the baseline assumptions for this future traffic condition includes conversion of the Bernard Drive at SR-41 intersection to a two-lane roundabout by Caltrans, which is expected to be in place prior to 2040. As shown in the table, all study area intersections would operate at acceptable levels of service during the peak hours for Plan Area Buildout (2040) traffic conditions without the Specific Plan.

Table 5.11-8 Intersection Delay and LOS—Plan Area Buildout (2040) Traffic Conditions without the Specific Plan

Intersection	Traffic Control	Jurisdiction	AM Peak Hour		PM Peak Hour		Friday Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Southbound 1-5 at SR-41 Ramps	Signal	Caltrans	16.8	B	16.1	B	16.9	B
2. Northbound I-5 at SR-41 Ramps	TWSC	Caltrans	10.7	B	10.9	B	14.2	B
3. Bernard Drive at SR-41	Roundabout	Caltrans	5.3	A	15.5	A	5.9	A
4. 25th Avenue at SR-41	TWSC	Caltrans	10.3	B	11.4	B	12.4	B
5. Utica Avenue at 25th Street	TWSC	County	8.7	A	8.7	A	9.0	A
6. Utica Avenue at Southbound I-5 Ramp	TWSC	Caltrans	9.1	A	9.0	A	9.7	A
7. Utica Avenue at Northbound I-5 Ramp	TWSC	Caltrans	9.6	A	9.4	A	9.8	A
8. Utica Avenue at Frontage Road	TWSC	County	0.0	A	8.9	A	8.8	A

Notes: TWSC = Two-way Stop Controlled
Source: Kittelson2020.

Freeway Mainline and Merge/Diverge

Table 5.11-9 summarizes the densities and corresponding LOS used for the traffic analysis. The freeway LOS calculation worksheets performed with HCS are presented in Appendix I of the TIA (Appendix G1). As shown in Table 5.11-9, the freeway mainlines would operate at an acceptable level of service under the Plan Area Buildout (2040) traffic conditions without the Specific Plan, with exception of the following four freeway mainlines, which are forecast to operate at LOS D during the Friday peak hour: (1) I-5 Northbound at Utica Avenue On-Ramp, merge; (2) I-5 Northbound at SR-41 Off-Ramp, diverge; (3) I-5 Southbound at Utica Avenue Off-Ramp, diverge; and (4) I-5 Southbound at SR-41 On-Ramp, merge.

Table 5.11-9 Freeway Mainline and Merge/Diverge Peak Hour LOS —Plan Area Buildout (2040) Traffic Conditions without the Specific Plan

Segment/Ramp	Type	Mainline Lanes	AM Peak Hour		PM Peak Hour		Friday Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-5 Northbound								
South of Utica Avenue	Basic	2	11.1	B	16.6	B	22.9	C
Utica Avenue On-Ramp	Merge	1	13.1	B	20.1	C	**28.0**	**D**
Between Utica Avenue to SR-41	Basic	2	11.1	B	16.6	B	22.9	C
SR-41 Off-Ramp	Diverge	1	13.9	B	20.8	C	**27.8**	**D**
North of SR-41	Basic	2	11.0	A	16.8	B	24.3	C
I-5 Southbound								
South of Utica Avenue	Basic	2	12.4	B	16.5	B	24.4	C
Utica Avenue Off-Ramp	Diverge	1	15.4	B	20.4	C	**28.8**	**D**
Between Utica Avenue to SR-41	Basic	2	12.4	B	16.5	B	24.4	C
SR-41 On-Ramp	Merge	1	15.8	B	21.0	C	**31.2**	**D**
North of SR-41	Basic	2	12.6	B	16.2	B	24.6	B
SR-41 Northbound								
South of 25th Avenue	Basic	2	1.9	A	4.5	A	6.1	A
SR-41 Southbound								
South of 25th Avenue	Basic	2	3.1	A	2.6	A	6.3	A

Notes: **Bold** = deficient operations
Source: Kittelson2020.

Off-Ramp Queues

Under the Plan Area Buildout (2040) traffic conditions without the Specific Plan, all ramps would operate at an acceptable LOS and there are no exiting queues exceeding capacity, with all exiting 95th percentile queues below four vehicles during all peak hours.

Plan Area Buildout (2040) Traffic Conditions with the Specific Plan

Intersections

To assess future traffic conditions for the Plan Area Buildout (2040) traffic conditions with the Specific Plan, traffic related to the Specific Plan was added to the Plan Area Buildout (2040) traffic conditions without the Specific Plan. The intersection operations for the Plan Area Buildout (2040) traffic conditions with the Specific Plan are listed in Table 5.11-10. As noted above, the baseline assumptions for this future traffic condition includes conversion of the Bernard Drive at SR-41 intersection to a two-lane roundabout by Caltrans, which is expected to be in place prior to 2040.

Table 5.11-10 Intersection Delay and LOS—Plan Area Buildout (2040) Traffic Conditions with the Specific Plan

Intersection	Traffic Control	Jurisdiction	AM Peak Hour		PM Peak Hour		Friday Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Southbound 1-5 at SR-41 Ramps	Signal	Caltrans	**82.8**	**F**	47.9	D	44.4	D
2. Northbound I-5 at SR-41 Ramps	TWSC	Caltrans	11.4	B	13.5	B	21.1	C
3. Bernard Drive at SR-41	Roundabout	Caltrans	6.1	A	6.3	A	**9.7**	**A**
4. 25th Avenue at SR-41	TWSC	Caltrans	12.3	B	13.4	B	14.9	B
5. Utica Avenue at 25th Avenue	Round-about	County	13.4	B	10.4	B	14.1	B
6. Utica Avenue at Southbound I-5 Ramp	TWSC	Caltrans	**38.6**	**E**	17.5	C	31.2	D
7. Utica Avenue at Northbound I-5 Ramp	TWSC	Caltrans	**144.3**	**F**	**497.1**	**F**	**1,968.1**	**F**
8. Utica Avenue at Frontage Road	TWSC	County	0.0	A	9.6	A	9.0	A

TWSC = Two-way Stop Controlled
Source: Kittelson2020.

As shown in the table, all study area intersections would operate at acceptable levels of service during the peak hours for Plan Area Buildout (2040) traffic conditions with the Specific Plan, except for the following intersections:

- Southbound I-5 at SR-41 Ramps (AM peak hour)
- Utica Avenue at Southbound I-5 Ramp (AM peak hour)
- Utica Avenue at Northbound I-5 Ramp (AM peak hour, PM peak hour, and Friday peak hour)

Impacts under this traffic scenario are as follows:

- The increase in delay for Southbound I-5 at SR-41 Ramps in the AM peak hour would be 66.0 seconds, causing operations to degrade from LOS B to LOS F.

- The increase in delay for Utica Avenue at Southbound I-5 Ramp in the AM peak hour would be 29.5 seconds, causing operations to degrade from LOS A to LOS E.

- The increase in delay for Utica Avenue at Northbound I-5 Ramp in the AM peak hour would be 134.7 seconds, in the PM peak hour would be 487.7 seconds, and in the
- Friday peak hour would be greater than 200 seconds, degrading operations from LOS A to LOS F during all three periods.

Therefore, potentially significant impacts would occur to the four aforementioned intersections under the Plan Area Buildout traffic conditions with the Specific Plan.

Freeway Mainline and Merge/Diverge

Table 5.11-11 summarizes the densities and corresponding LOS used for this analysis. The Freeway LOS calculation worksheets performed with HCS are presented in Appendix I of the TIA (Appendix G). As shown in Table 5.11-11, a total of nine freeway facilities would operate at an LOS below (worse) Caltrans' target of LOS C under the Plan Area Buildout traffic conditions with the Specific Plan.

Table 5.11-11 Freeway Mainline and Merge/Diverge Peak Hour LOS—Plan Area Buildout (2040) Traffic Conditions with the Specific Plan

Segment/Ramp	Type	Mainline Lanes	AM Peak Hour		PM Peak Hour		Friday Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-5 Northbound								
South of Utica Avenue	Basic	2	25.6	C	24.6	C	23.7	C
Utica Avenue On-Ramp	Merge	1	**35.3**	**D**	**42.3**	**E**	**43.1**	**E**
Between Utica Avenue to SR-41	Basic	2	**26.4**	**D**	**29.4**	**D**	**28.4**	**D**
SR-41 Off-Ramp	Diverge	1	**30.7**	**D**	**33.1**	**E**	**32.6**	**D**
North of SR-41	Basic	2	**27.3**	**D**	**27.7**	**D**	**26.6**	**D**
I-5 Southbound								
South of Utica Avenue	Basic	2	**27.1**	**D**	**26.8**	**D**	26.0	C
Utica Avenue Off-Ramp	Diverge	1	**35.5**	**E**	**32.2**	**D**	**30.5**	**D**
Between Utica Avenue to SR-41	Basic	2	**32.8**	**D**	**28.1**	**D**	**27.6**	**D**
SR-41 On-Ramp	Merge	1	**39.0**	**E**	**34.2**	**D**	**34.9**	**D**
North of SR-41	Basic	2	**29.1**	**D**	**26.9**	**D**	25.9	C

Source: Kittelson2020.
Bold = deficient operations

Off-Ramp Queues

Under the Plan Area Buildout (2040) traffic conditions with the Specific Plan, freeway ramps would continue to operate at an acceptable LOS with the exception of the southbound I-5 at SR-41 Ramps (AM peak hour), Utica Avenue at southbound I-5 Ramp (AM peak hour), and Utica Avenue at northbound I-5 Ramp (AM, PM, and Friday peak hours). At the southbound I-5 at SR-41 ramps, the off-ramp 95th percentile queue during the AM peak hour would be less than six vehicles and would not exceed capacity. At Utica Avenue at the southbound I-5 ramp, the off-ramp 95th percentile queue during the AM peak hour is less than 11

vehicles (approximately 275 feet). While this queue does not exceed capacity, it is addressed as part of the operations mitigation measures for this intersection at the end of this section. At Utica Avenue and the northbound I-5 ramp, the off-ramp's 95th percentile queue is less than 12 vehicles (approximately 285 feet) during the AM peak hour, less than 14 vehicles (approximately 350 feet) during the PM peak hour, and less than 24 vehicles (approximately 598 feet) during the Friday peak hour. These queues are addressed as part of the operations mitigation measures for this intersection at the end of this section.

Signal Warrants

Signal warrants are a set of criteria used to evaluate the potential need for a traffic signal at an unsignalized or stop-controlled intersection. The methodology for the signal warrant analysis is included in the 2014 California Manual on Uniform Traffic Control Devices. The manual states that if one or more of the criteria for signal warrants is met, an engineering study is required to evaluate other factors to determine if an intersection must be signalized. The TIA used Warrant 3 criteria, which are based on traffic volumes entering the intersection during the peak hour. The signal warrant calculations are included in Appendix J of the TIA (Appendix G1). Table 5.11-12 provides the peak hour signal warrant analysis for the Plan Area Buildout (2040) traffic conditions with the Specific Plan. As shown in the table, signal warrants would be met at three intersections during the AM, PM, and Friday peak hours.

Table 5.11-12 Peak hour Signal Warrants—Plan Area Buildout (2040) Traffic Conditions with the Specific Plan

Intersection	Traffic Control	Jurisdiction	AM Peak Hour	PM Peak Hour	Friday Peak Hour
2. Northbound I-5 at SR-41 Ramps	TWSC	Caltrans	Not Met	Not Met	Met
4. 25th Avenue at SR-41	TWSC	Caltrans	Not Met	Not Met	Not Met
6. Utica Avenue at Southbound I-5 Ramp	TWSC	Caltrans	Met	Met	Met
7. Utica Avenue at Northbound I-5 Ramp	TWSC	Caltrans	Met	Met	Met
8. Utica Avenue at Frontage Road	TWSC	Caltrans	Not Met	Not Met	Not Met

Notes: The Specific Plan would implement a roundabout at Intersection 5. TWSC = Two-way Stop Controlled
Source: Kittelson2020.

Site Access Driveways and Queues

Site access would be provided via the intersection of Utica Avenue at 25th Avenue. The location where 25th intersects Utica Avenue would be relocated approximately 1,000 feet from the I-5 southbound ramps interchange. An analysis consistent with the HCM methodology was performed for the 95th percentile queue for the Plan Area's major access intersection at Utica Avenue at 25th Avenue. The site access into the Plan Area would be developed as a roundabout (see Figure 3-4, *Specific Plan Land Use Plan*). The roundabout would operate at acceptable LOS B (14.1 seconds of delay). The 95th percentile queue is the queue length that has only a 5 percent probability of being exceeded during the analysis period. The 95th percentile queues would be approximately 240 feet in the northbound direction, two feet in the eastbound direction, and 91 feet in the westbound direction. The anticipated queues would not adversely affect traffic on Utica Avenue in the vicinity of the off-ramps with I-5. Therefore, no significant impact would occur.

Roadway Segment Capacity Evaluation

The roadway network along the Plan Area frontage and in the vicinity of the Plan Area is primarily comprised by two-lane undivided roadways, except for Utica Avenue, which under the Specific Plan would be widened to provide an additional lane in each direction between the 25th Avenue/Utica Avenue and I-5 southbound ramp/Utica Avenue intersections. A roadway segment capacity analysis was conducted at the segments in the vicinity of the Plan Area and is provided in Table 5.11-13. As shown in the table, all studied roadway segments would operate at acceptable levels of service (LOS D or better). Therefore, no significant impact would occur.

Table 5.11-13 Roadway Segment Daily LOS—Plan Are Buildout (2040) Traffic Conditions with Specific Plan

Intersection	Type	Weekday		Friday	
		ADT	LOS	ADT	LOS
Utica Avenue west of 25th Avenue (south leg)	2-Lane Facility	220	B	780	B
Utica Avenue between Plan Area access eastern driveway and I- 5 southbound ramps	4-Lane Facility	12,830	B	16,040	C
Utica Avenue between I- 5 southbound ramps and I- 5 northbound ramps	2-Lane Facility	7,990	C	10,060	C
Utica Avenue between I- 5 northbound ramps and Frontage Road	2-Lane Facility	1,640	B	2,490	B
Utica Avenue east of Frontage Road	2-Lane Facility	1,640	B	2,490	B
25th Avenue south of Utica Avenue	2-Lane Facility	12,830	C	16,400	D

Source: Kittelson2020.

Transit, Bicycle and Pedestrian Facilities

The Kings Area Rural Transit (KART) provides regular transit service via Route 12 in Kettleman City, an unincorporated community of the County approximately 6 miles to the northwest (see Figure 3-1, *Regional Location*). The nearest bus stop to the Plan Area is located on Becky Pease Street at Standard Oil Avenue, approximate two miles from Intersection #2 of the study area and over six miles northwest of the Plan Area. As shown in Figure 3-4, *Aerial Photograph*, there are currently no pedestrian or bicycle facilities or improvements in or near the Plan Area.

The mobility plan for Jackson Ranch (see Figure 3-5, *Vehicular Circulation Plan*) addresses all aspects of the public realm within street rights-of-way, including landscaping, sidewalks, and travel lanes. The mobility plan does not include any bicycle or public transportation facilities or improvements, as none are needed to serve the Plan Area due to its intended use and location in the County where no such facilities or improvements exist.

The pedestrian access and circulation improvements for the Plan Area include a system of safe and convenient sidewalks along all internal roads, and along the southern boundary of Utica Avenue. The rights-of-way for the various roadways will include parkway-separated sidewalks. Individual development project will provide pedestrian walkways internal to the development sites that will connect to the sidewalks proposed

along the roadways, as well as to provide a means for pedestrians to circulate within the development sites. The proposed pedestrian circulation plan would only serve to connect uses in the Plan Area; it would not provide any offsite connections to adjacent or surrounding agricultural properties as there is nothing to connect to. Additionally, the Specific Plan would support and would not conflict with the County's Circulation Element goals, objectives, and policies relating to transit, bicycle or pedestrian facilities.

Based on the preceding, implementation of the Specific Plan would not result in any significant impacts on transit, bicycle, or pedestrian facilities.

Specific Plan – Phase One Buildout

Phase One Buildout (2023) Traffic Conditions without the Specific Plan

Intersections

The study area intersection operations for the Phase One Buildout (2023) traffic conditions without the Specific Plan are provided in Table 5.11-14. As shown in the table, all study area intersections would operate at acceptable levels of service during the peak hours under these traffic conditions.

Table 5.11-14 Intersection Delay and LOS—Phase One Buildout (2023) Traffic Conditions without the Specific Plan

Intersection	Traffic Control	Jurisdiction	AM Peak Hour		PM Peak Hour		Friday Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Southbound 1-5 at SR-41 Ramps	Signal	Caltrans	16.7	B	15.7	B	16.0	B
2. Northbound I-5 at SR-41 Ramps	TWSC	Caltrans	9.9	A	10.0	A	11.5	B
3. Bernard Drive at SR-41	Signal	Caltrans	28.7	C	21.8	C	27.3	C
4. 25th Avenue at SR-41	TWSC	Caltrans	9.6	A	10.3	B	10.8	B
5. Utica Avenue at 25th Avenue	TWSC	County	8.7	A	8.6	A	8.8	A
6. Utica Avenue at Southbound I-5 Ramp	TWSC	Caltrans	9.0	A	8.9	A	9.3	A
7. Utica Avenue at Northbound I-5 Ramp	TWSC	Caltrans	9.4	A	9.3	A	9.4	A
8. Utica Avenue at Frontage Road	TWSC	County	0.0	A	8.9	A	8.7	A

Notes: TWSC = Two-way Stop Controlled
Source: Kittelson2020.

Freeway Mainline and Merge/Diverge

The freeway LOS calculation worksheets performed with HCS are presented in Appendix G of the TIA (Appendix G1). As shown on Table 5.11-15, all freeway facilities would operate acceptably under the Phase One Buildout (2023) traffic conditions with the Specific Plan.

Table 5.11-15 Freeway Mainline and Merge/Diverge Peak Hour LOS—Phase One Buildout (2023) Traffic Conditions without the Specific Plan

Segment/Ramp	Type	Mainline Lanes	AM Peak Hour		PM Peak Hour		Friday Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-5 Northbound								
South of Utica Avenue	Basic	2	7.9	A	11.8	B	15.7	B
Utica Avenue On-Ramp	Merge	1	9.3	B	14.2	B	19.3	C
Between Utica Avenue to SR-41	Basic	2	7.9	A	11.8	B	15.7	B
SR-41 Off-Ramp	Diverge	1	9.9	B	14.8	B	19.7	C
North of SR-41	Basic	2	7.9	A	12.0	B	16.5	B
I-5 Southbound								
South of Utica Avenue	Basic	2	8.8	A	11.8	B	16.6	B
Utica Avenue Off-Ramp	Diverge	1	11.0	B	14.6	B	20.5	C
Between Utica Avenue to SR-41	Basic	2	8.8	A	11.8	B	16.6	B
SR-41 Off-Ramp	Merge	1	11.2	B	14.8	B	21.2	C
North of SR-41	Basic	2	9.0	A	11.6	B	16.6	B

Source: Kittelson2020.

Off-Ramp Queues

All ramps operate at acceptable LOS and there are no exiting queues exceeding capacity under the Phase One Buildout (2023) traffic conditions without the Specific Plan, with all 95th percentile queues at study off-ramps below three vehicles during all peak hours.

Phase One Buildout (2023) Traffic Conditions with the Specific Plan

Intersections

To assess future traffic conditions with the Specific Plan, Specific Plan traffic was added to the Phase One Buildout (2023) conditions without the Specific Plan. The intersection operations for the Phase One Buildout (2023) traffic conditions with the Specific Plan are listed in Table 5.11-16.

Table 5.11-16 Intersection Delay and LOS—Phase One Buildout (2023) Traffic Conditions with the Specific Plan

Intersection	Traffic Control	Jurisdiction	AM Peak Hour		PM Peak Hour		Friday Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Southbound 1-5 at SR-41 Ramps	Signal	Caltrans	18.2	B	18.8	B	13.9	B
2. Northbound I-5 at SR-41 Ramps	TWSC	Caltrans	10.3	B	10.6	B	12.5	B
3. Bernard Drive at SR-41	Signal	Caltrans	25.6	C	20.4	C	27.3	C
4. 25th Avenue at SR-41	TWSC	Caltrans	10.2	B	10.8	B	11.5	B
5. Utica Avenue at 25th Street	Round-about	County	7.1	A	6.2	A	7.5	A
6. Utica Avenue at Southbound I-5 Ramp	TWSC	Caltrans	12.2	B	12.1	B	15.0	C
7. Utica Avenue at Northbound I-5 Ramp	TWSC	Caltrans	26.5	D	23.7	C	**100.5**	**F**
8. Utica Avenue at Frontage Road	TWSC	County	0.0	A	9.2	A	8.8	D

Source: Kittelson and Associates 2020
Bold = deficient operations
TWSC = Two-way Stop Controlled

As shown in the table, all study area intersections would operate at acceptable levels of service during the peak hours for the Phase One Buildout (2023) traffic conditions with the Specific Plan, except for the Utica Avenue and northbound I-5 ramp intersection in the Friday peak hour.

The increase in delay related to the Specific Plan for Utica Avenue at northbound I-5 ramp in the Friday peak hour would be 91.1 seconds, causing operations to degrade from LOS A to LOS F. Therefore, the Specific Plan would result in a potentially significant impact to this intersection during the Friday Peak Hour under the Phase One Buildout (2023) traffic conditions with the Specific Plan.

Freeway Mainline and Merge/Diverge

Table 5.11-17 summarizes the densities and corresponding LOS used for the freeway mainline merge-diverge analysis. The freeway LOS calculation worksheets performed with HCS are presented in Appendix G of the TIA (Appendix G1). As shown on Table 5.11-17, all freeway facilities would operate at or below target LOS C, which is considered acceptable by Caltrans, under the Phase One Buildout (2023) traffic conditions with the Specific Plan.

Table 5.11-17 Freeway Mainline and Merge/Diverge Peak Hour LOS—Phase One Buildout (2023) Traffic Conditions with the Specific Plan

Segment/Ramp	Type	Mainline Lanes	AM Peak Hour		PM Peak Hour		Friday Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-5 Northbound								
South of Utica Avenue	Basic	2	16.8	B	16.7	B	16.2	B
Utica Avenue On-Ramp	Merge	1	25.7	C	25.7	C	24.1	C
Between Utica Avenue to SR-41	Basic	2	17.6	B	17.6	B	17.3	B
SR-41 Off-Ramp	Diverge	1	22.0	C	22.3	C	21.6	C
North of SR-41	Basic	2	17.7	B	17.6	B	17.2	B
I-5 Southbound								
South of Utica Avenue	Basic	2	18.0	B	17.4	B	17.0	B
Utica Avenue Off-Ramp	Diverge	1	23.5	C	23.3	C	21.3	C
Between Utica Avenue to SR-41	Basic	2	18.9	C	18.5	C	18.3	C
SR-41 On-Ramp	Merge	1	23.2	C	23.3	C	23.3	C
North of SR-41	Basic	2	18.2	C	17.9	B	25.9	C

Source: Kittelson and Associates 2020

Off-Ramp Queues

As shown in Table 5.11-16, under the Phase One Buildout (2023) traffic conditions with the Specific Plan, all ramps would continue to operate at acceptable LOS with the addition of Specific Plan traffic with the exception of the Utica Avenue at northbound I-5 ramp during the Friday peak hour. The longest queue would occur on Friday peak hours when the off-ramp's 95th percentile queue would be 8 vehicles, or 200 feet in length. However, the off-ramp length is approximately 1,000 feet in length and would be able to accommodate the queue. Therefore, no significant impact would occur.

Signal Warrants

As with the signal warrants discussion under the Plan Area Buildout (2040) with Specific Plan traffic conditions with the Specific Plan section above, the TIA used Warrant 3 criteria for the Phase One Buildout (2023) traffic conditions with the Specific Plan, which are based on traffic volumes entering the intersection during the peak hour. The signal warrant calculations are included in Appendix J of the TIA (Appendix G1). Table 5.11-18 provides the peak hour signal warrant analysis for the Phase One Buildout (2023) traffic conditions with the Specific Plan. As shown in the table, signal warrants would be met at two intersections during the AM, PM, and Friday peak hours.

Table 5.11-18 Peak hour Signal Warrants, 2023 With Phase One Buildout Condition

Intersection	Traffic Control	Jurisdiction	AM Peak Hour	PM Peak Hour	Friday Peak Hour
2. Northbound I-5 at SR-41 Ramps	TWSC	Caltrans	Not Met	Not Met	Not Met
4. 25th Avenue at SR-41	TWSC	Caltrans	Not Met	Not Met	Not Met
6. Utica Avenue at Southbound I-5 Ramp	TWSC	Caltrans	Met	Met	Met
7. Utica Avenue at Northbound I-5 Ramp	TWSC	Caltrans	Not Met	Not Met	Met
8. Utica Avenue at Frontage Road	TWSC	Caltrans	Not Met	Not Met	Not Met

Notes: The Specific Plan would implement a roundabout at Intersection 5.
TWSC = Two-way Stop Controlled
Source: Kittelson and Associates 2020

Site Access Driveways and Queues

As with the Plan Area Buildout (2040) traffic conditions with Specific Plan analysis above, site access to the Plan Area would be provided at Utica Avenue and 25th Avenue intersection. The site access into the Plan Area would be developed as a roundabout (see Figure 3-4, *Specific Plan Land Use Plan*). Under the Phase One Buildout (2023) traffic conditions with the Specific Plan, this intersection would operate at an acceptable LOS A as shown in Table 5.11-16. Therefore, no significant impact would occur.

Transit, Bicycle, and Pedestrian Facilities

The analysis provided above under the Plan Area Buildout (2040) traffic conditions with the Specific Plan apply here as well. As concluded, implementation of the Specific Plan would not result in any significant impacts on transit, bicycle, or pedestrian facilities

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The roadway is a north-south, two-lane road that is surrounded by agricultural uses on both sides and runs from the Plan Area to Kettleman City. The water main would stretch along this roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Implementation of the offsite water main improvements would not directly or indirectly conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The roadway would continue to operate as it exists today, as a two-lane arterial road connection the Plan Area to other developed areas of the County, including Kettlemen City to the northwest. Therefore, implementation of the offsite water infrastructure improvements would not result in adverse environmental impacts.

Impact 5.11-2: Implementation of the Specific Plan would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). [Threshold T-2]

Impact Analysis. CEQA Guidelines Section 15064.3 describes how transportation impacts are to be analyzed after SB 743. It eliminates auto delay, LOS, and similar measures of vehicular capacity or traffic congestion as the sole basis for determining significant impacts:

> Generally, VMT is the most appropriate measure of transportation impacts. For the purposes of this section, VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) … [regarding roadway capacity], a project's effect on automobile delay shall not constitute a significant environmental impact.

As with all jurisdictions in California, the County has an opt-in period until July 1, 2020, to adopt the guidelines and new VMT-based criteria. Currently, the County has not adopted VMT guidelines or criteria and continues to use its established LOS and roadway capacity criteria to evaluate transportation impacts under CEQA. Therefore, the analysis in this section relies on currently adopted County methodologies and criteria to evaluate transportation impacts (see Impact 5.11-1, above) and is provided for informational purposes.

Specific Plan – Plan Area Buildout

VMT Calculation Methodology

VMT provides an indication of the amount of travel in the roadway system by multiplying the number of trips by the distance travelled. For example, 10 vehicles taking 10-mile trips each would result in a total of 100 VMT. The State of California Office of Planning and Research (OPR) in its Technical Advisory on Evaluating Transportation Impacts in CEQA has provided recommendations pertaining to the appropriate methodology for analyzing impacts related to residential, office, retail, and other land use projects. Specifically, OPR recommends VMT per capita for residential projects and VMT per employee for office projects. When estimating VMT using trip-based models, the home-based VMT per capita and home-based work VMT per employee should be used.

A travel demand model was utilized for the Specific Plan to identify average VMT/employee and average VMT/population for the County and in the project study area. Modeling results from Caltrans' California Statewide Travel Demand Model (CSTDM) were reviewed to identify land use and average VMT per household and VMT per employee in the project study area. The Plan Area is in traffic analysis zone (TAZ) 2602. Attachment A of the VMT Analysis Memorandum (Appendix G2) includes the outputs for the TAZs in Kings County and TAZ 2602.

Truck mix (percentage of trucks of overall traffic) is based on a review of truck volumes on I-5, and the percentage of truck trips for industrial and warehousing land uses. For the VMT analysis, the daily proportion of truck traffic is considered to be 30 percent of the total traffic that would be generated by the Specific Plan. Truck trip distances were based on a review of locations of key goods movement businesses and freight transportation facilities in the San Joaquin Valley, and a review of truck volumes on roads and the tonnage

distribution per direction in the San Joaquin Valley. This information is available in Section 2 of the San Joaquin Valley Goods Movement Plan.

Trip distances for employees and businesses patrons were based on a review of employment and population US Census data, and the travel distances to the communities in the region (Kittelson 2020b).

Project Truck VMT

Table 5.11-19 present the truck VMT that would be generated by the Specific Plan under the Phase One and Two buildout conditions. As shown in the table, Phase One buildout would generate a total truck VMT of 234,317 and Phase Two buildout would generate a total truck VMT of 398,096.

Table 5.11-19 Jackson Ranch Specific Plan Truck VMT

Day of the Week	Trip Type[1]	Daily trips (autos+trucks)	Truck Trip	Truck Trip Length	Truck VMT
Phase One					
Fridays - Sundays	Net New Trips	6,487	1,946	144	279,946
	Diverted/Pass-bys	5,519	1,656	0.5	828
	Total	**12,006**	**3,602**	**—**	**280,774**
Mondays-Thursdays	Net New Trips	5,414	1,624	144	233,641
	Diverted/Pass-bys	4,508	1,352	0.5	676
	Total	**9,922**	**2,977**	**—**	**234,317**
Phase Two					
Fridays - Sundays	Net New Trips	10,216	3,065	143.9	440,884
	Diverted/Pass-bys	6,826	2,048	0.5	1,024
	Total	**17,042**	**5,113**	**—**	**441,908**
Mondays-Thursdays	Net New Trips	9,205	2,762	143.9	397,242
	Diverted/Pass-bys	5,698	1,709	0.5	855
	Total	**14,903**	**4,471**	**—**	**398,096**

Source: Kittelson 2020b.

1. New trips refer to trips generated by the project being studied with the specific purpose of visiting the site being studied. Diverted trips are trips that are already in the circulation network and divert from their path to reach the project during a trip between their main origin and destination; and pass-by trips are trips already on the way from an origin to a primary trip destination that will make an intermediate stop at the site being studied without a route diversion.

Project Employee VMT

As discussed above, OPR recommends lead agencies to analyze transportation impacts associated with office uses according to the average VMT/employee. For retail, OPR recommends analyzing retail projects based on its net VMT increase.

Office/Employment VMT

Table 5.11-20 presents the VMT/employee and VMT/population in the project study area (Traffic Analysis Zone 2602) compared to the regional averages in the County. As shown the table, the Plan Area is in an area of the County where the average VMT/employee is 9.6 and the VMT/employee is 25.9 for the County.

Table 5.11-20 Travel Demand Model VMT Averages

Trip Type	Plan Area (TAZ 2602)	Kings County Average
VMT/Employee	9.6	25.9
VMT/Population	22.9	11.5

Source: Kittelson 2020b.
Notes: TAZ = traffic analysis zone

The areas surrounding the Plan Area are primarily agricultural (see Figure 3-3, *Aerial Photograph*). The nearest communities to the Plan Area are generally northwest of the Plan Area—these include Kettleman City (7 miles), Avenal (19 miles), Stratford (21.9 miles), and Huron (23.8 miles). The Specific Plan would provide opportunities for employment in the service sector in a primarily agricultural-area of the County. Therefore, it is expected that the Specific Plan will provide a reduction in vehicle miles travelled for employees seeking to work in the service sector.

Retail VMT

As shown Table 5.11-20, the Plan Area is in an area where the regional average VMT/population is 22.9 and the VMT/employee is 11.5 for the County. As noted above, the areas surrounding the Plan Area are primarily agricultural and the nearest communities are all generally northwest of the Plan Area and range in distance from 7 to 23.8 miles. The Specific Plan would provide retail, dining, and services in a primarily agricultural-area of the County. It is anticipated that some of the retail, dining, and services to be provided will be similar (e.g., fast food restaurants, gas stations) to those provided in the other nearby communities, such as Kettleman City; however, it is also anticipated that other retail, dining, and services to be provided are not currently offered in the nearby communities and would therefore new to the region. Therefore, it is anticipated that implementation of the Specific Plan may result in an increase in VMT for residents of the communities to the north seeking similar retail, dining, and service options offered in the Plan Area, as they would have to first pass through those communities in order to reach the Plan Area. However, it is also anticipated that implementation of the Specific Plan may result in a reduction in VMT for residents of the communities to the north seeking certain retail, dining, and service options that are currently not offered in those communities or anywhere near those communities, but will be available in the Plan Area. For example, residents of Kettleman City (7 miles to the northwest) have to drive 15 miles to Avenal to access a vehicle sales business. The Specific Plan allows for the development of vehicle sales in the Plan Area; therefore, if a vehicle sales business operates out of the Plan Area, it would be much closer (7 miles versus 15 miles) than the same business located in Avenal.

Project Total VMT

Table 5.11-21 present the total VMT generated by the Specific Plan under the Phase One and Two buildout conditions. As shown in the table, Phase One buildout would generate a total VMT of 301,682 and Phase Two buildout would generate a total VMT of 472,345.

Table 5.11-21 Jackson Ranch Specific Plan Total VMT

Day of the Week	Trip Type[1]	Truck VMT	Employee VMT	Auto VMT	Total VMT
Phase One					
Fridays - Sundays	Net New Trips	279,946	8,246	74,734	362,926
	Diverted/Pass-bys	828	0	1,931	2,759
	Total	**280,774**	**8,246**	**76,665**	**365,685**
Mondays-Thursdays	Net New Trips	233,641	8,246	57,541	299,428
	Diverted/Pass-bys	676	0	1,578	2,254
	Total	**234,317**	**8,246**	**59,119**	**301,682**
Phase Two					
Fridays - Sundays	Net New Trips	440,884	29,598	58,860	529,342
	Diverted/Pass-bys	1,024	0	2,389	3,413
	Total	**441,908**	**29,598**	**61,249**	**532,755**
Mondays-Thursdays	Net New Trips	397,242	29,598	42,656	469,966
	Diverted/Pass-bys	855	0	1,994	2,849
	Total	**398,096**	**29,598**	**44,650**	**472,345**

Source: Kittelson 2020b.

1. New trips refer to trips generated by the project being studied with the specific purpose of visiting the site being studied. Diverted trips are trips that are already in the circulation network and divert from their path to reach the project during a trip between their main origin and destination; and pass-by trips are trips already on the way from an origin to a primary trip destination that will make an intermediate stop at the site being studied without a route diversion.

Conclusion

Kings County, which is the lead agency under CEQA has not yet adopted VMT methodologies and thresholds to evaluate projects. Currently, the County relies on roadway capacity and LOS to evaluate transportation impacts under CEQA. Therefore, the VMT analysis has been provided for informational purposes. In Summary, the Specific Plan would not conflict or be inconsistent with the County's currently adopted traffic analysis methodology and no impacts regarding VMT would occur.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, the Specific Plan

would not conflict or be inconsistent with the County's currently adopted traffic analysis methodology and no impacts regarding VMT would occur.

Specific Plan – Offsite Water Infrastructure Improvements

As described above, an offsite water main would be installed within the County's right-of-way along 25th Avenue in order to provide potable water to future uses of the Plan Area. Implementation of the offsite water main improvements would not conflict or be inconsistent with CEQA Guidelines § 15064.3 as the improvements would not result in the generation of VMT. The roadway would continue to operate as it exists today, as a two-lane arterial road connection from the Plan Area to other developed areas of the County, including Kettlemen City to the northwest. Therefore, implementation of the offsite water infrastructure improvements would not result in adverse environmental impacts.

5.11.4 Cumulative Impacts

Therefore, the Traffic Impact Analysis prepared for the Specific Plan determined that there are no cumulative projects and used ambient growth.

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. However, implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in cumulative transportation impacts.

Similar to the Specific Plan, other development projects in the County would be required to undergo discretionary review and would be subject to the transportation impact requirements and CEQA review. For example, as with the Specific Plan, other development projects would be required to analyze the potential transportation impacts that would result from the projects. They would also be required to demonstrate their consistency with applicable transportation goals and policies of the Kings County General Plan. Additionally, as with the Specific Plan, other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to transportation impacts.

The Specific Plan's cumulative traffic impacts were analyzed under Impact 5.11-1 above. Impacts and mitigation measures are discussed in Sections 5.11.6 and 5.11.7, below. As discussed in these sections, the Specific Plan's impacts at identified intersections and freeway facilities would be significant and unavoidable. Therefore, the Specific Plan's contribution to cumulative traffic impacts at the identified intersections and freeway facilities would be cumulatively considerable and therefore significant.

5.11.5 Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to transportation apply to the Specific Plan and are described in detail in Section 5.11.1.1, *Regulatory Background*, above.

- SB 743
- Caltrans Guide for the Preparation of Traffic Impact Studies
- KCAG 2018 RTP/SCS
- Kings County General Plan

5.11.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.11-2.

Without mitigation, the following impacts would be **potentially significant**:

- **Impact 5.11-1.** Implementation of the Specific Plan would have a potentially significant impact at one intersection under the Phase One Buildout (2023) traffic conditions; three intersections under the Plan Area Buildout (2040) traffic conditions; and nine freeway mainline segments under the Plan Area Buildout (2040) traffic conditions.

5.11.7 Mitigation Measures

Impact 5.11-1

Specific Plan – Plan Area Buildout

Mitigation Measures Incorporated – Caltrans Intersections

TRAF-1 Prior to issuance of building permits for structures that would be accommodated by the Jackson Ranch Specific Plan under the Plan Area Buildout [2040] Traffic Conditions with the Specific Plan analyzed in the Traffic Impact Analysis Report dated March 2020 (incorporate herein as reference), the project applicant shall enter into an agreement with Caltrans, which outlines a schedule for installation of traffic improvements listed below, and make payment to Caltrans toward the construction of the traffic improvements:

Southbound I-5 at SR-41 Ramps (AM peak hour): Optimize the traffic signal timing (timing splits and cycle).

- **Utica Avenue at Southbound I-5 Ramp (AM peak hour):** Convert the intersection from a two-way stop-controlled intersection to a roundabout.
- **Utica Avenue at Northbound I-5 Ramp (AM peak hour, PM peak hour, and Friday peak hour):** Convert the intersection from a two-way stop-controlled intersection to a roundabout.

Specific Plan – Phase One Buildout

TRAF-2 Prior to issuance of building permits for structures that would be accommodated by the Jackson Ranch Specific Plan under the Phase One Buildout [2023] Traffic Conditions with the Specific Plan analyzed in the Traffic Impact Analysis Report dated March 2020 (incorporate herein as reference), the project applicant shall enter into an agreement with Caltrans, which outlines a schedule for installation of traffic improvements listed below, and make payment to Caltrans toward the construction of the traffic improvements:

Utica Avenue at Northbound I-5 Ramp (Friday peak hour): Convert the intersection from a two-way stop-controlled intersection to an all-way stop-controlled (stop signs) intersection.

Mitigation Measures Considered and Rejected – Caltrans Freeway Mainlines

As shown in Table 5.11-11, *Freeway Mainline and Merge/Diverge Peak Hour LOS—Plan Area Buildout (2040) Traffic Conditions with the Specific Plan*, the following Caltrans facilities would operate at an LOS below (worse) Caltrans' target of LOS C under the Plan Area Buildout (2040) Traffic Conditions with the Specific Plan:

- I-5 Northbound at Utica Avenue on-ramp, merge (AM, PM, Friday peak hours)
- I-5 Northbound between Utica Avenue and SR-41, mainline segment (AM, PM, Friday peak hours)
- I-5 Northbound at Utica Avenue off-ramp, diverge (AM, PM, Friday peak hours)
- I-5 Northbound north of SR-41, mainline segment (AM, PM, Friday peak hours)
- I-5 Southbound south of Utica Avenue, mainline segment (AM, PM, Friday peak hours)
- I-5 Southbound at Utica Avenue Off-Ramp, diverge (AM, PM, Friday peak hours)
- I-5 Southbound between Utica Avenue and SR-41, mainline segment (AM, PM, Friday peak hours)
- I-5 Southbound at SR-41 On-Ramp, merge (AM, PM, Friday peak hours)
- I-5 Southbound north of Utica Avenue, mainline segment (AM and PM peak hours)

The freeway segments listed would perform unacceptably during the peak hours without mitigation. Mitigating the identified impacts to these freeway segments would require a complete reconstruction of the freeway and additional travel lanes. Since freeways are an interconnected system, it would not be possible, nor effective, to provide isolated spot improvements of one segment of the freeway where deficient operations are observed. Additionally, the facilities are under the jurisdiction of Caltrans and not Kings County. Furthermore, at this time, funding has not been allocated by Caltrans to expand the freeway to its ultimate buildout configuration of six lanes. Therefore, there are no feasible mitigation measures to reduce impacts to these freeway facilities to a level of less than significant.

Specific Plan – Offsite Water Infrastructure Improvements

No mitigation measures are required.

5.11.8 Level of Significance After Mitigation

Impact 5.11-1

Caltrans Intersections

Implementation of mitigation measures TRAF-1 and TRAF-2 require payment to Caltrans for the identified improvements. As demonstrated in the TIA (Appendix G1), the improvements would mitigate traffic impacts at the identified intersections. However, these intersections are under the jurisdiction of Caltrans, and Kings County cannot guarantee timing or implementation of the improvements within Caltrans jurisdiction. Also, the improvements identified in mitigation measures TRAF-1 and TRAF-2 are not part of an adopted plan or program that will guarantee construction of the improvements within a specified period. As a result, Impact 5.11-1 for the Specific Plan (under both the Phase One and Plan Area buildout conditions)would be ***significant and unavoidable***.

Caltrans Freeway Mainlines

As discussed above, the freeway segments listed would perform unacceptably during the peak hours without mitigation. Mitigating the identified impacts to these freeway segments would require a complete reconstruction of the freeway and additional travel lanes. Since freeways are an interconnected system, it would not be possible, nor effective, to provide isolated spot improvements of one segment of the freeway where deficient operations are observed. Additionally, the facilities are under the jurisdiction of Caltrans and not Kings County. Furthermore, at this time, funding has not been allocated by Caltrans to expand the freeway to its ultimate buildout configuration of six lanes. Therefore, there are no feasible mitigation measures to reduce impacts to these freeway facilities to a level of less than significant. As a result, Impact 5.11-1 with respect to the Specific Plan – Plan Area Buildout would remain would be ***significant and unavoidable***.

5.11.9 References

California Department of Transportation (Caltrans). 2002. Guide for the Preparation of Traffic Impact Studies.

Kings County. 2010, January. 2035 Kings County General Plan Circulation Element.

Kittelson & Associates, Inc. 2020a, March. Traffic Impact Analysis Report.

———. 2020b, April. VMT Analysis Memorandum.

5. Environmental Analysis
TRANSPORTATION

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5.12 TRIBAL CULTURAL RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Jackson Ranch Specific Plan (Specific Plan) to impact tribal cultural resources in unincorporated Kings County— specifically, in the area covered by the Specific Plan (Plan Area) and its surroundings. Tribal cultural resources include landscapes, sacred places, or objects with cultural value to a California Native American Tribe. Other potential impacts to cultural resources (i.e., prehistoric, historic, and disturbance of human remains) are evaluated in Section 5.4, *Cultural Resources*, and impacts to paleontological resources are addressed in Section 5.5, *Geology and Soils*.

The analysis in this section is based in part on the following information:

- *Culture Resources Inventory*, ECORP Consulting, Inc., April 2019

This report is confidential and not available for public review. It is incorporated by reference in this section.

5.12.1 Environmental Setting

5.12.1.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, or guidelines related to archeological resources that are applicable to the Specific Plan are summarized below.

Federal

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites that are on federal lands and Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony to lineal descendants and culturally affiliated Indian tribes.

State

California Public Resources Code

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

- **California Public Resources Code 5097.9–5097.991** provides protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

- **California Public Resources Code 5097.9** states that no public agency or private party on public property shall "interfere with the free expression or exercise of Native American Religion." The code further states that "No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine… except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, except for parklands larger than 100 acres."

California Health and Safety Code

The discovery of human remains is regulated per California Health and Safety Code Section 7050.5, which states that "In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation…until the coroner…has determined…that the remains are not subject to…provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible…. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and…has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission."

Senate Bill 18

Existing law provides limited protection for Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places. These places may include sanctified cemeteries, religious, ceremonial sites, shrines, burial grounds, prehistoric ruins, archaeological or historic sites, Native American rock art inscriptions, or features of Native American historic, cultural, and sacred sites.

Senate Bill 18 was signed into law in September 2004 and went into effect on March 1, 2005. It places requirements upon local governments for developments within or near TTCPs. SB 18 requires local jurisdictions to provide opportunities for involvement of California Native Americans tribes in the land planning process for the purpose of preserving "traditional tribal cultural places" (TTCP). The Final Tribal Guidelines recommend that NAHC provide written information as soon as possible but no later than 30 days after receiving notice of the project to inform the lead agency if the proposed project is determined to be in proximity to a TTCP and another 90 days for tribes to respond to a local government if they want to consult with the local government to determine whether the project would have an adverse impact on the TTCP. There is no statutory limit on the consultation duration. Forty-five days before the action is publicly considered by the local government council, the local government refers action to agencies, following the CEQA public review time frame. The CEQA public distribution list may include tribes listed by NAHC who

have requested consultation, or it may not. If NAHC, the tribe, and interested parties agree upon the mitigation measures necessary for the proposed project, it would be included in the project's EIR.

SB 18 requires a city or county to consult with NAHC and any appropriate Native American tribe for the purpose of preserving relevant TTCP's prior to the adoption, revision, amendment, or update of a city's or county's general plan. Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, the Final Tribal Guidelines advise that SB 18 requirements extend to specific plans as well, since state planning law requires local governments to use the same process for amendment or adoption of specific plans as general plans (defined in Government Code Section 65453). In addition, SB 18 provides a new definition of TTCP, requiring a traditional association of the site with Native American traditional beliefs, cultural practices, or ceremonies or the site must be shown to actually have been used for activities related to traditional beliefs, cultural practices, or ceremonies. Previously, the site was defined to require only an association with traditional beliefs, practices, lifeways, and ceremonial activities. In addition, SB 18 law also amended Civil Code Section 815.3 and adds California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places.

Assembly Bill 52

The Native American Historic Resource Protection Act (Assembly Bill 52 or AB 52) took effect July 1, 2015, and incorporates tribal consultation and analysis of impacts to tribal cultural resources (TCRs) into the CEQA process. Under AB 52, a tribal cultural resource is defined similar to tribal cultural places under SB 18—sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. Or the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a tribal cultural resource.

AB 52 requires TCRs to be analyzed like any other CEQA topic and establishes a consultation process for lead agencies and California tribes. It requires inclusion of a new section in CEQA documents titled Tribal Cultural Resources.

Similar to SB 18, AB 52 requires consultation with tribes at an early stage to determine whether the project would have an adverse impact on a TCR and define mitigation to protect them. Per AB 52, within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested in writing to be notified. The tribe then has 30 days of receiving the notification to respond if it wishes to engage in consultation. The lead agency must initiate consultation within 30 days of receiving the request from the tribe. Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a TCR, or a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached. Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on TCR's and discuss feasible alternatives or mitigation that avoid or lessen the impact.

Local

Kings County General Plan

The Resource Conservation Element of the Kings County General Plan includes the various goals, objectives and policies that relate to tribal cultural resources in the County, which include:

- **RC GOAL I1.** Preserve significant historical and archaeological sites and structures that represent the ethnic, cultural, and economic groups that have lived and worked in Kings County.
  - **RC Policy I1.2.4.** The County will respectfully comply with Government Code §65352.3 (SB18) by conducting formal consultations with tribes as identified by the Native American Heritage Commission on all general plan and specific plan amendments.
  - **RC Policy I1.2.5.** The County will respectfully comply with Government Code §6254.(r) and 6254.10 by protecting confidential information concerning Native American cultural resources. For example, adopting internal procedures such as keeping confidential archaeological reports away from public view or discussion in public meetings
  - **RC Policy I1.2.6.** The County shall work in good faith with the Santa Rosa Rancheria Tachi Yokut Tribe ("Tribe"), the developer and other parties if the Tribe requests return of certain Native American artifacts from private development projects (e.g. for interpretive or educational value). The developer is expected to act in good faith when considering the Tribe's request for artifacts. Artifacts not desired by the Tribe shall be placed in a qualified repository as established by the California State Historical Resources Commission (see Guidelines for the Curation of Archaeological Collections, May 1993). If no facility is available, then all artifacts shall be donated to the Tribe.

5.12.1.2 EXISTING CONDITIONS

Cultural Setting – Ethnohistory

The following information is summarized from the cultural resources inventory prepared for the Specific Plan by ECORP Consulting, Inc. (ECORP).

The predominant Native American group occupying the region encompassing the Plan Area at the time of European contact in the late eighteenth century was the Southern Valley Yokuts. The southern San Joaquin Valley was originally covered by sloughs and marshes surrounding three shallow lakes: Tulare Lake, Buena Vista Lake, and Kern Lake. The lakes were fed by rivers coming from the Sierra Nevada, such as the Kern River. Areas away from the lakes, rivers, and sloughs were dry since the valley receives less than 10 inches of rain per year. The Southern Valley Yokuts obtained fish, freshwater mussels, turtles, and waterfowl from the lakes and marshes. Fishing was carried out year-round. Elk and pronghorn antelope were hunted from blinds when they came to the lakes to drink. Grass and tule seeds were important plant foods. Since there were no oak trees on the valley floor, acorns were not an important food.

The Yokuts lived in villages occupied year-round near lakes, sloughs, and rivers. However, groups of people left the village and lived in temporary camps while collecting seeds in the spring. Single family houses consisted of wood frames covered with tule mats. There were also large multi-family communal residences that were long mat-covered rectangular structures with steep pitched roofs. These structures were divided into sections so that each family had their own fireplace and door. A shade porch, where cooking took place, ran along the front of the building. Seeds, roots, and dried fish were stored in mat covered granaries raised off the ground. Each village also had an earth-covered sweathouse for use by men. Tule was used to make baskets and cradles. Wood and stone were obtained through trade with groups outside the valley. Marine shells obtained from coastal people were made into beads by the Yokuts. Clamshell disks circulated as money and Olivella beads and abalone pendants were strung for necklaces. Canoes and rafts made of tule were used for water transport.

The Southern Valley Yokuts were organized in territorial tribelets with an average population of 350 people. Each tribelet spoke a different dialect and claimed the resources within its territory. Each tribelet had a chief who belonged to the Eagle lineage. Usually there was more than one village in a tribelet territory. The Plan Area is located at what would have been the western shore of Tulare Lake in the territory of the Tachi tribelet. The village of Walna once existed north of the Plan Area near the present-day community of Kettleman City. There were no villages in the Plan Area, but there could have been temporary camps used by seed collecting parties.

Cultural Resources Records Search Results

A cultural resources records search of the California Historical Resources Information System (CHRIS) was conducted by ECORP in March 2019 at the Southern San Joaquin Valley Information Center (SSJVIC). The purpose of the records search was to determine the extent of previous cultural resources investigations and the presence of previously-recorded archaeological sites or historic-period (i.e., more than 50 years in age) resources within a one-mile (1600-meter) radius of the Plan Area.

Materials reviewed included reports of previous cultural resources investigations, archaeological site records, historical maps, and listings of resources on the National Register of Historic Places, California Register of Historical Resources, California Points of Historical Interest, California Landmarks, and National Historic Landmarks. Topographic maps from 1930, 1934, 1943, 1956, 1972, 1982, 2012, and 2015 were also reviewed for any indications of property usage and built environment. Aerial photographs taken in 1994, 2005, 2009, 2010, 2012, and 2014 were also reviewed.

The results of the CHRIS records search were received by ECORP on March 19, 2019. The records search indicated that seven cultural resources investigations were conducted within a one-mile radius of the Plan Area between 1987 and 2017. Four of these investigations overlap a small section of the northeast corner of the Plan Area, comprising a negligible portion of the overall Plan Area. Details of all seven investigations are presented in Table 5.4-1, *Previous Cultural Studies In or Within One Mile of the Plan Area*, of Section 5.4, *Cultural Resources*.

Sacred Lands File Search Results

A search of the Sacred Lands File by NAHC was requested by ECORP in March 2019. This search was requested to determine whether there are sensitive or sacred Native American resources in the vicinity of the Plan Area that could be affected by the Specific Plan. Results of the Sacred Lands File records search were received by ECORP on March 19, 2019. The results of the Sacred Lands File records search were negative, indicating no record for the presence of Native American Sacred Lands within the Plan Area. NAHC did however, note that the absence of specific site information in the Sacred Lands File does not indicate the absence of Native American cultural resources in the area.

Historic Aerial and Map Review Results

ECORP conducted a review of historic-period maps and aerial photographs. The review indicates that the Plan Area was in a rural, sparsely developed area in the early twentieth century. The Plan Area remains as undeveloped agricultural land (see Figure 3-3, *Aerial Photograph*). A 1930 topographic map of the area shows no indication of land uses other than agricultural. Interstate 5 (I-5) and the California Aqueduct (which both abut the Plan Area boundary; see Figure 3-3) are first depicted on the 1982 topographic map.

The earliest aerial photograph available is from 1994. In this photo, the Plan Area is undeveloped, and the surrounding area is similar to its current condition. I-5 and the California Aqueduct are both visible in the image. No structures or other evidence of a built environment are present in the Plan Area in the 1994 aerial photograph or subsequent images.

Field Survey Results

Archaeological field work was conducted by ECORP archaeologists from March 11 to 15, 2019 and consisted of an intensive systematic pedestrian survey. The Plan Area was examined for the presence of cultural artifacts and features by walking the entire 415-acre Plan Area, using parallel east-west transects 10 to 15 meters apart. No newly-identified pre-contact or historic-era cultural resources were identified as a result of the field survey.

5.12.2 Thresholds of Significance

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

TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold TCR-1.i

This impact will not be addressed in the following analysis.

5.12.3 Environmental Impacts

5.12.3.1 IMPACT ANALYSIS

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

Impact 5.12.1: Implementation of the Specific Plan could result in an impact on unknown subsurface tribal cultural resources. [Threshold TCR-1.ii]

Impact Analysis. As stated earlier, TCR's are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that is either eligible or listed in the California Register of Historical Resources or local register of historical resources (Public Resources Code Section 21074). Or the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR. As also stated above, TTCP's are Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places with cultural value to a California Native American tribe.

Following is a discussion of the potential impacts to Native American cultural resources, including TCRs and TTCP's, as a result of development that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

AB 52 Consultation

Conducting consultation early in the CEQA process allows tribal governments, public lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to TCRs, and reduce the potential for delay and conflict in the environmental review process. The intent of the consultations is to provide an opportunity for interested Native American contacts to work

together with the lead agency (in this case, Kings County) during the project planning process to identify and protect TCRs.

The provisions of CEQA, Public Resources Code Sections 21080.3.1 et seq. (also known as AB 52), requires meaningful consultation with California Native American Tribes on potential impacts to TCRs, as defined in Public Resources Code Section 21074. As part of the AB 52 process, Native American tribes must submit a written request to the relevant lead agency if it wishes to be notified of projects that require CEQA public noticing and are within its traditionally and culturally affiliated geographical area. The lead agency must provide written, formal notification to the tribes that have requested it within 14 days of determining that a project application is complete or deciding to undertake a project. The tribe must respond to the lead agency within 30 days of receipt of the notification if it wishes to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the request for consultation. Consultation concludes when either 1): the parties agree to mitigation measures to avoid a significant effect, if one exists, on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. AB 52 also addresses confidentiality during tribal consultation per Public Resources Code Section 21082.3(c).

Since adoption of AB 52 in 2015, no Californian Native American Tribes have requested in writing to be listed on the County's AB 52 project notification list. Therefore, no tribes were consulted and the County complied with its obligations under AB 52. The AB 52 consultation process was deemed complete.

However, the County has coordinated with the Santa Rosa Rancheria Tachi Yokut Tribe during the County's environmental review process for Specific Plan as is standard practice for all development projects conducted in the County. The County has incorporated the comments/input from the Santa Rosa Rancheria Tachi Yokut Tribe into this DEIR.

SB 18 Consultation

Although not a CEQA issue or requirement, the County notified local tribes identified by NAHC about the Specific Plan on May 16, 2019, pursuant to the requirements of SB 18. The purpose of the notification letter was to invite local tribes to consult pursuant to SB 18 and to provide an opportunity for the County and interested tribes to work together in the project planning process in order to protect TTCP's that might not be known to the County or recorded at the SSJVIC. The letter included a brief description of the Specific Plan and Plan Area location. The following tribes were notified:

- Tule River Indian Tribe
- Table Mountain Rancheria
- Santa Rosa Rancheria Tachi Yokut Tribe
- Kings River Choinumni Farm Tribe
- Wuksache Indian Tribe/Eshom Valley Band

No tribes responded to the County's request for Native American consultation. Therefore, no tribes were consulted and the County complied with its obligations under SB 18. The SB 18 consultation process was deemed complete.

However, the County has coordinated with the Santa Rosa Rancheria Tachi Yokut Tribe during the County's environmental review process for Specific Plan as is standard practice for all development projects conducted in the County. The County has incorporated the comments/input from the Santa Rosa Rancheria Tachi Yokut Tribe into this DEIR.

Sacred Lands File Search

As noted earlier, a Sacred Lands File search was conducted by NAHC to determine if any sacred lands or traditional cultural properties had been identified on or near the Plan Area. This search was requested to determine whether there are sensitive or sacred Native American resources in the vicinity of the Plan Area that could be affected by the Specific Plan. Results of the Sacred Lands File records search were received by ECORP on March 19, 2019. The results of the Sacred Lands File records search were negative, indicating no record for the presence of Native American Sacred Lands within the Plan Area. NAHC did however, note that the absence of specific site information in the Sacred Lands File does not indicate the absence of Native American cultural resources in the area.

Cultural Resources Records Search and Field Survey

As noted earlier, A cultural resources records search of the CHRIS was conducted by ECORP in March 2019 at the SSJVIC. The purpose of the records search was to determine the extent of previous cultural resources investigations and the presence of previously-recorded archaeological sites or historic-period resources (i.e., more than 50 years in age) within a one-mile radius of the Plan Area. The records search indicated that seven cultural resources investigations were conducted within a one-mile radius of the Plan Area between 1987 and 2017. Four of these investigations overlap a small section of the northeast corner of the Plan Area, comprising a negligible portion of the overall Plan Area. Details of all seven investigations are presented in Table 5.4-1, *Previous Cultural Studies In or Within One Mile of the Plan Area*, of Section 5.4, *Cultural Resources*.

Additionally, no pre-contact or historic-era cultural resources were observed during the field survey of the Plan Area conducted by ECOPR in March 2019. Although the Plan Area is known to have been the territory of Yokut Native American groups, no pre-contact or historic-era Native American cultural resources were identified during the records search and none of these resources were visible or observed within the boundaries of the Plan Area during the field survey. Additionally, a review of historic-period maps and historic aerial photographs indicates that the Plan Area was in a rural, sparsely developed area in the early twentieth century. A 1930 topographic map of the area shows no indication of land uses other than agricultural. No other historic-era cultural resources or built environment cultural resources are present within the Plan Area.

Conclusion

Based on the preceding, the potential to uncover TCR's or TTCP's in the Plan Area is considered low. However, despite actions taken to ensure that all TCRs and TTCP's are located prior to construction, including record searches and field surveying, there still remains the possibility that undiscovered, buried TCR's or TTCP's might be encountered during ground-disturbing activities, such as excavation and grading. A substantial adverse change in the significance of discovered resource(s) could occur if not mitigated.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, a substantial adverse change in the significance of discovered resource(s) could occur if not mitigated.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. The roadway is a north-south, two-lane road that is surrounded by agricultural uses on both sides and runs from the Plan Area to Kettleman City. The water main would stretch along this roadway for approximately 4.2 miles. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the Plan Area to the new Kettleman City Surface Water Treatment Plant.

Given the existing disturbed character of the 25th Avenue right-of-way (consists of pavement and some areas of compacted soil), there is a low likelihood for subsurface TCR's or TTCP's to be discovered. Additionally, the entire roadway right-of-way has been subject to ground-disturbing activities similar to those that would occur under the proposed water main improvements. However, deeper excavations (up to a depth of approximately five feet for installation of the water main) along the roadway right-of-way may encounter significant archeological resources. Therefore, potential impacts to unidentified subsurface TCR's or TTCP's could occur as a result of water main-related grading activities.

5.12.4 Cumulative Impacts

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. However, implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could unearth unknown significant cultural resources, including TCR's and/or TTCP's. Other planned development projects in the County would involve ground disturbance and could damage TCR's and/or TTCP's that could be buried in those project sites.

However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, other development projects would require the preparation of site-specific cultural resource assessments, which would include some degree of surface-level surveying. As a part of the assessments, a cultural resources records search of the CHRIS and a Sacred Land Files search would also be required. Additionally, as with the Specific Plan, other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address TCR and TTCP impacts, including consultation under AB 52 and SB 18 (if required), which address accidental discoveries of

archaeological sites and resources, including TCR's and TTCP's. They would also be required to demonstrate their consistency with applicable Native American resources goals, objectives, and policies of the Kings County General Plan.

Furthermore, as demonstrated above, with mitigation, impacts on TCR's as a result of implementation of the Specific Plan would be reduced to a level of less than significant.

In consideration of the preceding, the Specific Plan's contribution to cumulative TCR and TTCP impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.12.5 Existing Regulations

The following laws, regulations, plans, or guidelines that pertain to tribal cultural resources apply to the Specific Plan and are described in detail in Section 5.12.1.1, *Regulatory Background*, above.

- Archaeological Resources Protection Act
- Assembly Bill 52 and Senate Bill 18
- California Public Resources Code Section 5097.9–5097.991
- California Health and Safety Code Section 7050.5

5.12.6 Level of Significance Before Mitigation

Without mitigation, the following impacts would be **potentially significant:**

- **Impact TCR-1.ii** Implementation of the Specific Plan could result in the unearthing and impact of an unidentified tribal cultural resource.

5.12.7 Mitigation Measures

Specific Plan – Plan Area Buildout

Mitigation Measure CUL-1 also applies here.

Specific Plan – Phase One Buildout

Mitigation Measure CUL-1 also applies here.

Specific Plan – Offsite Water Infrastructure Improvements

Mitigation Measure CUL-1 also applies here.

5.12.8 Level of Significance After Mitigation

With the implementation of Mitigation Measure CUL-1, potential impacts to tribal cultural resources would be reduced to a level of less than significant.

5.12.9 References

ECORP Consulting, Inc. 2019, April. Cultural Resources Inventory

Kings County Community Development Agency. 2010, January 26 (adopted). Resource Conservation Element. In 2035 Kings County General Plan. https://www.countyofkings.com/home/showdocument?id=3112.

5.13 UTILITIES AND SERVICE SYSTEMS

This section of the Draft Environmental Impact Report (DEIR) discusses the current conditions for utility and service system providers and evaluates the potential for implementation of the Jackson Ranch Specific Plan (Specific Plan) to impact these systems. Utilities and services systems include wastewater (sewage) collection and treatment; water supply and distribution; solid waste collection and disposal; and other public utilities. Impacts to hydrology (e.g., flooding), storm drainage systems, and water quality can be found in Section 5.7, *Hydrology and Water Quality*.

The analysis in this section is based, in part, on the following technical study:

- *Water Supply Assessment for the Jackson Ranch Business Park Specific Plan,* PlaceWorks, April 2020.

A complete copy of this technical study is included in Appendix H of this DEIR.

5.13.1 Wastewater Treatment and Collection Systems

5.13.1.1 ENVIRONMENTAL SETTING

Regulatory Background

State and local laws, regulations, plans, or guidelines related to wastewater treatment and collection that are applicable to the Specific Plan are summarized below.

State

California Water Code Section 13260

The California Water Code Section 13260(a), pursuant to the Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (Order No. 2003-0003-DWQ), states that persons discharging or proposing to discharge waste that could affect the quality of the waters of the state, other than into a community sewer system, shall file a Report of Waste Discharge (ROWD) containing information that may be required by the appropriate Regional Water Quality Control Board (RWQCB). Approval and issuance of a Waste Discharge Requirements (WDR) permit from the appropriate RWQCB pursuant to Section 13260 is also a requirement for certain wastewater treatment facilities.

Local

Kings County Code of Ordinances

Article VI (Plumbing Code) of Chapter 5 (Buildings and Structures) adopts the California Plumbing Code by reference and regulates the design and installation of indoor and outdoor plumbing systems.

Article VII (Wastewater) of Chapter 14 (Health and Welfare) was adopted to protect the health, safety, and welfare of the citizens of the county and to preserve the underground aquifers of potable water from contamination or deterioration in quality by the infiltration of contaminated waters.

Kings County Improvement Standards

The Kings County Improvement Standards specify the design improvements for streets, storm drains, sanitary sewers, and water supply. As outlined in Section 101 (Purpose and Standards) of the improvement standards, the standards serve as an engineering reference for Kings County staff and others in the following areas of development:

- **Development conditions:** these standards shall be consulted when requirements of an engineering or public works nature are to be applied to a project as conditions of development.
- **Development design:** these standards shall be used by developers' engineers when designing development improvements for County approval and by Public Works staff when reviewing improvement plans.
- **Development Inspection:** these standards shall be referenced by private contractors when constructing improvements to County requirements and by Public Works staff when inspecting such improvements for preliminary and final approval (Kings County 2003).

The design standards for wastewater systems are provided in Article 6 (Sanitary Sewerage) of the improvement standards. For example, according to Section 603 (Construction of a Sewage Treatment Facility), if construction of a sewage treatment facility is required, the operation and maintenance of the system shall be by a private company suitable to the County's Board of Supervisors.

Construction of new community sewage systems are also subject to review and approval by the County Health Department, County Public Works Department, and Central Valley Region RWQCB (Kings County, 2003).

Existing Conditions

As shown in Figure 3-3, *Aerial Photograph*, existing land uses in the development area covered by the Specific Plan, (Plan Area) primarily consist of agricultural land or rangeland. The agricultural production consists mainly of irrigated crops such as almonds pistachios, and stone fruits (apricots and plums); dry land grazing also occurs onsite. The Plan Area has historically been used for farming, and portions presently contain an orchard of almond trees near the end of their productive life expectancy. There are no structures and no land uses that generate wastewater. Therefore, the Plan Area is not connected to the public sewer system and does not contain onsite wastewater treatment facilities (such as septic tanks).

Thresholds of Significance

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

U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

U-3 Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

5.13.1.2 ENVIRONMENTAL IMPACTS

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

Impact 5.13-1: Development pursuant to the Specific Plan would result in the construction of new wastewater treatment facilities in the Plan Area; however, their construction and operation would not cause significant environmental effects. [Threshold U-1]

Impact Analysis. Following is a discussion of the potential wastewater treatment and collection impacts resulting from development projects that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area (Phase One Buildout), which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Due to the agriculturally-developed nature of the Plan Area and its surroundings (see Figure 3-3, *Aerial Photograph*), there are no existing wastewater infrastructure improvements or facilities in or surrounding the Plan Area. In order to provide wastewater service to the future uses of the Plan Area and to all phases of the Specific Plan, a wastewater collection and treatment system would be developed for the Plan Area (see Figure 3-9, *Wastewater Management Plan*). The system would consist of a wastewater collection system comprised of grease interceptors, influent screeners, pump tanks and associated gravity main piping. The system would also include a domestic wastewater treatment facility (WWTF) that would provide primary and advanced secondary treatment of wastewater. The WWTF would be placed in the eastern portion of the Plan Area, abutting Interstate 5 (I-5) (see Figure 3-9). The WWTF will occupy approximately 6.6 acres of the Plan Area.

Wastewater generated by land uses in the Plan Area would flow by gravity through a network of privately-maintained sewer laterals and mains to the WWTF. As shown in Figure 3-9, the sewer laterals and mains would be provided throughout the Plan Area to serve the individual development sites. The sewer laterals and mains would be located in roadways and easements as appropriate and typical for new development. The WWTF would be designed to treat up to a peak flow of 75,000 gallons per day of wastewater.

The WWTF would discharge treated wastewater to land in the Plan Area. Specifically, the WWTF would direct filtrate to either be recirculated back to the primary septic tank anoxic zone for denitrification or discharged to pressure dose sand lined (sand filter) dispersal beds depending on the desired recirculation ratio. This recycling process would provide greater than 50 percent nitrogen removal. The sand filter dispersal beds would provide additional treatment and allow for the dispersal of the filtrate to the native soils. Therefore, development of

the WWTF requires filing of a ROWD and approval and issuance of a WDR permit from the Central Valley RWQCB pursuant to California Water Code Section 13260. Pursuant to Section 13260, a ROWD was prepared for the WWTF and submitted to the Central Valley RWQCB for review and approval in April of 2020.

The potential environmental impacts associated with the Specific Plan's wastewater collection and treatment system , which includes the WWTF, are analyzed throughout this DEIR. Impacts to water quality from the proposed percolation ponds are addressed in Chapter 5-7, *Hydrology and Water Quality.* As substantiated in other topical sections of the DEIR, development of the Specific Plan's wastewater collection and treatment system would not result in any physical environmental effects beyond those identified in those sections, if any.

Additionally, construction of the WWTF is subject to review and approval by the Kings County Department of Public Health, Kings County Public Works Department, and the Central Valley RWQCB. The Specific Plan's wastewater collection and treatment system would also be required to be developed and operated in accordance with the Kings County Improvement Standards. For example, pursuant to Section 603 (Construction of a Sewage Treatment Facility) of the standards, the WWTF would be privately operated and maintained. Furthermore, all proposed plumbing improvements would be installed in accordance with the California Plumbing Code, which is adopted by reference in Article VI (Plumbing Code) of Chapter 5 (Buildings and Structures) of the Kings County Code of Ordinances.

Based on the preceding, development of the Specific Plan's wastewater collection and treatment system would not result in any impacts.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, no impact would occur as a result of the Specific Plan's wastewater collection and treatment system.

Specific Plan – Offsite Water Infrastructure Improvements

As discussed in Section 3.3.3.2, *Potable Water Management Plan*, of Chapter 3, *Project Description,* in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully paved roadway that is maintained by the County. The water main would stretch along this roadway for approximately 4.2 miles and would run from the Plan Area to the new Kettleman City Surface Water Treatment Plan (SWTP) (see Figure 3-6, *Proposed Offsite Water Main Route*). The offsite water infrastructure improvements would not result in the generation or require treatment of wastewater. Therefore, no impact would occur.

Impact 5.13-2: Wastewater generated from development pursuant to the Specific Plan would be privately treated onsite and not require treatment by a wastewater service provider. [Threshold U-3]

Impact Analysis. Following is a discussion of the potential wastewater generation impacts resulting from development projects that would be accommodated by the Specific Plan. The analysis considers impacts that

would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area (Phase One Buildout), which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

As indicated in Impact 5.13-1, above, wastewater generated by development that would be accommodated by the Specific Plan would be privately treated by an onsite via the WWTF. Since wastewater would be treated onsite, the local wastewater treatment provider in the region would not serve the Plan Area. As noted above, the WWTF would be designed to treat up to a peak flow of 75,000 gallons per day of wastewater. The treatment capacity would be more than adequate to serve the Specific Plan's wastewater treatment needs. Therefore, no impact to the wastewater providers' treatment capacity would occur.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, no impact to the wastewater providers' treatment capacity would occur.

Specific Plan – Offsite Water Infrastructure Improvements

As noted above, in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue The water main would stretch along this roadway for approximately 4.2 miles and would run from the Plan Area to the new SWTP (see Figure 3-6, *Proposed Offsite Water Main Route*). The offsite water infrastructure improvements would not result in the generation or require treatment of wastewater. Therefore, no impact to the wastewater providers' treatment capacity would occur.

5.13.1.3 CUMULATIVE IMPACTS

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County.

Implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in cumulative wastewater impacts in the County. As with the Specific Plan, other planned projects in Kings County would result in the generation of wastewater and require private or public wastewater collection and treatment systems. However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, as with the Specific Plan, other development projects in the County would be required to demonstrate how wastewater would either be privately treated or require treatment by a wastewater service provider. Other

development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address wastewater impacts.

Furthermore, as demonstrated above, implementation of the Specific Plan would not result in a cumulative impact relative to wastewater generation, collection, or treatment.

In consideration of the preceding, the Specific Plan's contribution to cumulative wastewater impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.13.1.4 EXISTING REGULATIONS

The following laws, regulations, plans, or guidelines that pertain to wastewater treatment and collection apply to the Specific Plan and are described in detail in Section 5.13.1.1, *Environmental Setting*, above.

- California Water Code Section 13260
- Kings County Code of Ordinances Article VII, Wastewater
- Kings County Code of Ordinances Article VI, Plumbing Code
- Kings County Improvement Standards

5.13.1.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.13-1 and 5.13-2.

5.13.1.6 MITIGATION MEASURES

No significant adverse impacts related to wastewater treatment and collection were identified and no mitigation measures are required.

5.13.1.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant adverse impacts related to wastewater treatment and collection were identified.

5.13.2 Water Supply and Distribution Systems

5.13.2.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal, state, and local laws, regulations, plans, or guidelines related to water supply and distribution that are applicable to the Specific Plan are summarized below.

Federal

Federal Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times since it came into law. The Act authorizes the U.S. Environmental Protection Agency (EPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Water Resources Control Board (SWRCB) conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

State

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.), which was passed in California in 1969 and amended in 2013, SWRCB has authority over State water rights and water quality policy. This Act divided the state into nine regional basins, each under the jurisdiction of a RWQCB to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions. RWQCBs regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. The plan Area is overseen by the Central Valley RWQCB.

California Senate Bill 610 and 221

Senate Bill (SB) 610 and SB 221 were amended in 2001 to assure coordination between the local water and land use decisions to confirm that California cities and communities are provided with adequate water supply. Specific projects require preparation of a Water Supply Assessment (WSA). The WSA is composed of information regarding existing and forecasted water demands, as well as information pertaining to available water supplies for the new development. The following projects require preparation of a WSA:

- Residential developments consisting of more than 500 homes.
- A business employing more than 1,000 people or having more than 500,000 square feet.
- A commercial office building employing more than 1,000 people or having more than 250,000 square feet of floor space.
- A hotel having more than 500 rooms.
- An industrial complex with more than 1,000 employees and occupying more than 40 acres of land.
- A mixed-use project that requires the same or greater amount of water as a 500 dwelling-unit project.

Mandatory Water Conservation

Following Governor Brown's declaration of a state of emergency on July 15, 2014, SWRCB adopted Resolution No. 2014-0038. The emergency regulation was partially repealed by Resolution No. 2017-0024. The remaining regulation prohibits several activities, including (1) the application of potable water to outdoor landscapes in a manner that causes excess runoff; (2) the use of a hose to wash a motor vehicle except where the hose is equipped with a shut-off nozzle; (3) the application of potable water to driveways and sidewalks; (4) the use of potable water in nonrecirculating ornamental fountains; and (5) the application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall. SWRCB resolution also directed urban water suppliers to submit monthly water monitoring reports to SWRCB.

The Water Conservation Act of 2009 (Senate Bill X7-7)

The Water Conservation Act of 2009, SB X7-7, requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water use by 20 percent by 2020, with an interim goal of a 10 percent reduction in per capita water use by 2015. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans. The SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards, it also requires that agricultural water suppliers prepare plans and implement efficient water management practices.

Water Conservation in Landscaping Act of 2006 (AB 1881)

The Water Conservation in Landscaping Act of 2006 (AB 1881) required the DWR to update the State Model Water Efficient Landscape Ordinance (Model Ordinance) by 2009. The Model Ordinance was issued on October 8, 2009. Under AB 1881, cities and counties are required to adopt a state updated model landscape water conservation ordinance by January 31, 2010, or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance. It also requires reporting on the implementation and enforcement of local ordinances, with required reports due by December 31, 2015 (DWR 2019).

2015 Update of the State Model Water Efficient Landscape Ordinance

To improve water savings in the landscaping sector, DWR updated the Model Ordinance in accordance with Executive Order B-29-15. The Model Ordinance promotes efficient landscapes in new developments and retrofitted landscapes. The Executive Order calls for revising the Model Ordinance to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf.

New development projects that include landscape areas of 500 square feet or more are subject to the Model Ordinance. This applies to residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review. The previous landscape size threshold for new development projects ranged from 2,500 square feet to 5,000 square feet.

California Green Building Standards Code

The California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11) establishes mandatory nonresidential measures for water efficiency and conservation under Chapter 5 (Nonresidential Mandatory Measures). The provisions of this chapter establish the means of conserving water used indoors, outdoors, and in wastewater conveyance. The code includes standards for water conserving plumbing fixtures and fittings and the use of potable water in landscaped areas.

Local

Kings County Improvement Standards

The Kings County Improvement Standards specify the design improvements for streets, storm drains, sanitary sewers, and water supply. As outlined in Section 101 (Purpose and Standards) of the improvement standards, the standards serve as an engineering reference for Kings County staff and others in the following areas of development:

- **Development conditions:** these standards shall be consulted when requirements of an engineering or public works nature are to be applied to a project as conditions of development.
- **Development design:** these standards shall be used by developers' engineers when designing development improvements for County approval and by Public Works staff when reviewing improvement plans.
- **Development Inspection:** these standards shall be referenced by private contractors when constructing improvements to County requirements and by Public Works staff when inspecting such improvements for preliminary and final approval (Kings County 2003.

The design standards for water supply systems are provided in Article 5 (Water Supply) of the improvement standards. For example, connections to an existing water system are covered under these standards and are specified in Section 502 (Connection to an Existing System).

Existing Conditions

Currently, the Dudley Ridge Water District (DRWD) delivers State Water Project (SWP) water from the adjacent California Aqueduct to the Plan Area for irrigation and fire protection purposes of the existing agricultural uses. The aqueduct is owned by the California Department of Water Resources (CDWR) and operated and maintained by CDWR's Division of Operations and Maintenance. Irrigation water is provided via direct connections to the aqueduct, which then feeds into a system of irrigation lines throughout the Plan Area.

Through a number of annexations over the years, DRWD has expanded in size from the original 29,330 acres to its current size of 37,602 acres, of which 25,679 acres have a water allocation and approximately 17,000 acres are currently cropped. DRWD delivers SWP water from the Governor Edmund G. Brown California Aqueduct (Aqueduct) through five delivery structures (turnouts). From each turnout, water is delivered to landowners through DRWD-owned, concrete-lined canals and/or underground pipelines to metered farm turnouts. DRWD owns approximately 12 miles of concrete-lined distribution canals and 10 miles of pipelines. DRWD does not own or operate any subsurface drainage facilities. The only surface water drainage facilities controlled

by DRWD are pipelines installed to carry local runoff under DRWD canals. Similar drainage pipelines and structures are owned and operated by the State of California to protect the Aqueduct and Interstate 5 from flooding (DRWD 2012).

The Kings County Community Services District (KCCSD) serves a population of approximately 1,500 and has 354 service connections. Previously, KCCSD obtained water for its service area from two groundwater wells, the Maud Street Well and the Becky Pease Street Well. However, there were problems with high concentrations of naturally occurring arsenic in the groundwater. The Maud Street Well is currently out of service due to well casing corrosion. The Becky Pease Well was installed in March, 1970. In April, 1979 the water system was sold to KCCSD. Initially the Becky Pease well had a capacity of 400 gallons per minute (gpm) and over time, with corrosion and plugging of the well perforations, the well capacity has reduced to 250 gpm. The well is 50 years old and is near the end of its life (Skaggs 2019, 2020).

As a result of high arsenic in groundwater, and with funding from SWRCB, KCCSD recently built the SWTP. The SWTP receives water from the SWP via the California Aqueduct and treats the water to drinking water standards prior to distribution to its customers. KCCSD has obtained an allocation of 900 acre-feet per year (AFY) from the SWP and the SWTP has a treatment capacity of 1.3 million gallons per day (1,456 AFY). However, on average, KCCSD will likely receive less than the full allocation amount due to water availability, drought conditions, and environmental/fisheries concerns.

Thresholds of Significance

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

U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

U-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

5.13.2.2 ENVIRONMENTAL IMPACTS

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

Impact 5.13-3: Implementation of the Specific Plan would result in the construction of new potable water distribution facilities; however, their construction and operation would not cause significant environmental effects. [Threshold U-1]

Impact Analysis. Following is a discussion of the potential impacts to potable water distribution facilities resulting from development projects that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout

of the Phase One development area (Phase One Buildout), which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Currently, the Dudley Ridge Water District delivers State Water Project water from the adjacent California Aqueduct to the Plan Area for irrigation and fire protection purposes of the existing agricultural uses. The aqueduct is owned by CDWR. Water supply from the aqueduct would continue to be used for irrigation and fire protection purposes only via the existing connections to the aqueduct. No activities or improvements within CDWR's property or easements are proposed under the Specific Plan, and no improvements or modifications to the existing aqueduct connections are proposed.

However, in order to provide potable water service to the future land uses of the Plan Area and to all phases of the Specific Plan, an offsite potable water main would be installed from the SWTP within the County's right-of-way in 25th Avenue to the Plan Area. The SWTP would provide the Specific Plan's potable water needs. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would be approximately 4.2 miles long and constructed from the northern boundary of the Plan Area to the SWTP. Once the water main improvements reach the 25th Avenue overpass at I-5 (see Figure 3-6), two scenarios could occur:

- **Preferred Scenario.** The water main would be installed in the bridge deck of the overpass structure. This scenario would require review and approval by the County and possibly Caltrans.

- **Alternative Scenario.** The water main would traverse downward and under I-5, which would require boring under the freeway. In addition to the County, this scenario would also require review and approval (including issuance of an encroachment permit) by Caltrans.

In addition to installation of the offsite water main, a system of underground water mains would be provided throughout the Plan Area to serve the individual development sites, as shown in Figure 3-7, *Potable Water Management Plan*. The onsite water system would connect to the new offsite water service being constructed in Utica Avenue. Onsite water systems would be located within roadways and easements as appropriate and typical for new development in the County.

The potential environmental impacts associated with the Specific Plan's potable water distribution system, which includes the offsite water main, are analyzed throughout this DEIR. As substantiated in other topical sections of the DEIR, development of the Specific Plan's potable water distribution system would not result in any physical environmental effects beyond those identified in those sections, if any.

Additionally, construction of the on- and offsite potable water distribution system is subject to review and approval by the Kettleman City Community Services District, Kings County Public Works Department Kings County Environmental Health Department, and possibly the California Department of Public Health. The system would also be required to be developed in accordance with the Kings County Improvement Standards. For example, connection to the SWTP would be required to be undertaken in accordance with the provisions of Section 502 (Connection to an Existing System) of the improvement standards. Additionally, the offsite

water main will be installed in an acceptable location within the right-of-way of 25th Avenue; it will be installed at the required design depth of the Kings County Public Works Department requirements. The offsite water system will be installed by and paid for by the project applicant/developer and upon completion, the system will be dedicated to KCCSD for ownership

Furthermore, all proposed plumbing improvements within the Plan Area would be installed in accordance with the California Plumbing Code, which is adopted by reference in Article VI (Plumbing Code) of Chapter 5 (Buildings and Structures) of the Kings County Code of Ordinances.

Finally, installation of the offsite water main and connection to the SWTP would require review and approval by KCCSD. It would also require approval from the Local Agency Formation Commission of Kings County for any KCCSD boundary or service extension that may be needed to serve the Specific Plan's potable water needs. Currently, the Plan Area is not in KCCSD's service area or sphere of influence (SOI) and therefore requires a SOI Amendment and service extension authorization with future annexation into their service area. The SWTP has more than adequate water treatment capacity to serve the Specific Plan's potable water needs, as demonstrated below under Impact 5.13-4.

Based on the preceding, development of the Specific Plan's potable water distribution system would not result in any impacts. Additionally, implementation of the Specific Plan would not result in the need for the construction of new or expansion of existing water treatment facilities, the construction of which could cause significant environmental effects.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, no impact would occur as a result of the Specific Plan's potable water distribution system. Additionally, implementation of the Specific Plan would not result in the need for the construction of new or expansion of existing water treatment facilities, the construction of which could cause significant environmental effects.

Specific Plan – Offsite Water Infrastructure Improvements

As noted above, in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue, which is a fully paved roadway that is maintained by the County. The water main would stretch along this roadway for approximately 4.2 miles and would run from the Plan Area to the new SWTP (see Figure 3-6, *Proposed Offsite Water Main Route*). The offsite water infrastructure improvements would not result in the need for or require treatment of potable water. Therefore, no impact would occur.

Additionally, the potential environmental impacts associated with the Specific Plan's offsite water infrastructure improvements are analyzed throughout this DEIR. As substantiated in other topical sections of the DEIR, development of the offsite improvements would not result in any physical environmental effects beyond those identified in those sections, if any.

Impact 5.13-4: Available water supplies are sufficient to serve development pursuant to the Specific Plan during normal, dry, and multiple dry years. [Threshold U-2]

Impact Analysis. Following is a discussion of the potential impacts to water supply resulting from development projects that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area (Phase One Buildout), which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

The Plan Area is currently agricultural land use and receives irrigation and fire protection water from DRWD via the California Aqueduct. Water supply from DRWD would continue to be used for agriculture irrigation and fire protection, as well as for landscape irrigation and any other outdoor water demands for development projects accommodated by the Specific Plan. The amount of water required from DRWD for the Specific Plan's outdoor uses would likely be less than the current water demand because approximately 34 percent of the Plan Area would be converted from agriculture to the land uses listed in Table 5.13-1. Additionally, all outdoor water needs (e.g., landscaping, agricultural) would be supplied by DRWD via the California Aqueduct.

Therefore, only the indoor water use supplied by KCCSD's SWTP was calculated in the Water Supply Assessment (WSA) prepared for the Specific Plan (Appendix H), using the domestic water demand rates as specified in the Water Service Technical Memorandum prepared for the Specific Plan (Yamabe and Horn 2019). As shown in Table 5.13-1, the total estimated potable water demand for buildout of the Specific Plan (Phase Two) is 41,944 gpd (47 AFY).

Table 5.13-1 Projected Water Demand Estimate for the Specific Plan

Land Use	Area and Unit Numbers	Potable Water Demand Rate	Total Potable Water Usage (gal/day)
Phase One			
Retail	11,980 SF	0.05 gpd/SF	599
Restaurants	19,880 SF	0.32 gpd/SF	6,362
Gas Station	12,369 SF	0.21 gpd/SF	2,597
Hotel	187 Rooms	70 gpd/room	13,090
Truck Stop	10,890 SF	0.46 gpd/SF	5,009
		Total	**27,657**
Phase Two			
Commercial Use	1,099 Employees 2,230,708 SF	13 gpd/employee	14,287
		Total (Plan Area Buildout)	**41,944**

Source: PlaceWorks 2020, Appendix H.
Notes: gal/day and gpd = gallons per day; SF = square feet

Implementation of the Specific Plan includes the construction of a new water main connection to the SWTP approximately 4.2 miles north of the Plan Area (see Figure 3-6, *Proposed Offsite Water Main Route*). The plant is owned and operate by KCCSD. Therefore, the WSA also calculated the future water demand for Kettleman City as shown in Table 5.13-2. As indicated in the table, KCCSD's projected water demand for the year 2040 is 419 AFY.

Table 5.13-2 Projected Water Demand for Kings County Community Services District

Year	Increase in Population	Water Demand Rate for New Residents/Employees (gpcd) [1]	Increase in Water Demand (gal/day)	Increase in Water Demand (AFY)	Total Water Demand (AFY)
2020	—	—	—	—	315
2025	422	57[2]	24,054	27	342
2030	421	55	23,155	26	368
2035	422	55	23,210	26	394
2040	422	54	22,788	25	419

Notes: gpcd = gallons per capita per day; gal/day = gallons per day; AFY = acre feet per year
[1] Source: Pacific Institute 2020. This assumes that the increase in population will involve new construction, which will require low-flow plumbing fixtures and efficient outdoor landscaping, pursuant to CALGreen building codes and the Model Ordinance. This reduces the per capita water demand. It also is assumed that the proposed development in the County would be primarily residential at 95 percent of growth, while the per capita demand for commercial, industrial, institutional, and large landscapes was weighted at 5 percent. It is assumed that the current County residents would continue to have a water demand of 187 gpcd, which is conservative and assumes no reduction in current water usage rates and no retrofitting with water efficient fixtures or appliances.
[2] The per capita demand for the year 2025 is assumed to be the average of the 2020 per capita demand and the 2030 per capita demand.

Table 5.13-3 includes a comparison of water demand and supply for KCCSD for the year 2040. As noted earlier, KCCSD was allocated 900 AFY from the SWP. However, on average, KCCSD may not receive its full allotment of 900 AFY and may receive only up to 750 AFY (SKAGGS 2019). Also, in the past 10 years, the SWP has supplied an average of 43 percent of total Table A water allocations to SWP contractors. This decrease in supply is mainly due to regulatory restrictions, such as those aimed at protecting the estuary's resident and migratory fish species. Taking in to account the average supply of 43 percent, KCCSD's allotment has been at 387 AFY (43 percent of the allotted 900 AFY). Furthermore, KCCSD's SWTP incurs water losses of approximately 10 percent as a result of various processes, including automatic strainers, upflow clarifier sludge blowdowns, and membrane backwash cycles (Appendix H). . With the additional 10 percent reduction, the total SWP water supplied to KCCSD would be 349 AFY, as shown in Table 5.13-3.

Table 5.13-3 Water Supply and Demand for KCCSD for the Year 2040 (AFY)

Demand	
KCCSD 2040 Demand	419
Specific Plan Water Demand	47[1]
Total Demand	**466**
Supply	
SWP	387
Losses	(38)
Total Supply	**349**

Source: PlaceWorks 2020, Appendix H.
Notes: AFY = acre feet per year
[1] The Specific Plan is not within KCCSD's current service area and therefore, the Specific Plan's water demand of 47 AFY is added to the projected future demand for this evaluation.

As shown in Table 5.13-3, the combined water demand for Kettleman City (419 AFY) and the Specific Plan (47 AFY) is 466 AFY is greater than the total water supply for KCCSD of 349 AFY. However, current DRWD water supplied to the Plan Area (allocated by right for the agricultural uses) from the California Aqueduct is 750 AFY. The DRWD water being supplied is used for irrigating the existing almond orchards in the Plan Area. However, as noted above, the SWP has supplied an average of 43 percent of total Table A water allocations to SWP contractors, including DRWD. Under a conservative scenario and taking in to account the average supply of 43 percent, DRWD's water allotment to the Plan Area has been approximately 323 AFY.

In 2019, approximately 185 acres of the Plan Area were irrigated. Under the Specific Plan, approximately 102.5 acres of irrigated almonds would be removed and replaced with commercial uses under the Specific Plan, resulting in a reduction in almond orchards (approximately 82.5 acres of almonds to remain in production) and DRWD water needed for irrigation purposes. With 82.5 acres remaining in production, this would require approximately 149 AFY of DRWD water for irrigating the almond orchards. Deducting the irrigation needs of the almond orchards to be removed, there would be approximately 174 AFY of DRWD water available to dedicate to KCCSD (based on the 2019 allocation). Additionally, as noted above, KCCSD's SWTP incurs water losses of approximately 10 percent as a result of various processes. With the additional 10 percent reduction, the total additional water that KCCSD would have to supply from its SWTP would be approximately 156 AFY.

With the additional 156 AFY, KCCSD would have 505 AFY (349 AFY plus 156 AFY) to supply to Jackson Ranch and its customers, which exceeds the required 466 AFY needed to supply the total demand shown in Table 5.13-3. Therefore, available water supplies are sufficient to serve the Specific Plan and reasonably foreseeable future development during normal, dry, and multiple dry years.

Additionally, individual development projects accommodated by the Specific Plan would be required to comply with the provisions of CALGreen, which establishes mandatory nonresidential measures for water efficiency and conservation under Chapter 5 (Nonresidential Mandatory Measures). The provisions establish the means of conserving water used indoors, outdoors, and in wastewater conveyance. The provisions also include standards for water conserving plumbing fixtures and fittings and the use of potable water in landscaped areas. To improve water savings in the landscaping sector, the individual development projects would also follow the state's current Model Ordinance.

Based on the preceding, no impact to water supply would occur as a result of development pursuant to the Specific Plan.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As concluded above, no impact to water supply would occur as a result of development pursuant to the Specific Plan.

Specific Plan – Offsite Water Infrastructure Improvements

As noted above, in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue. The water main would stretch along this roadway for approximately 4.2 miles and would run from the Plan Area to the new SWTP (see Figure 3-6, *Proposed Offsite Water Main Route*). The offsite water infrastructure improvements would not result in the need for potable water. Therefore, no impact would occur.

5.13.2.3 CUMULATIVE IMPACTS

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County.

Implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in cumulative water impacts in the County. As with the Specific Plan, other planned projects in Kings County would result in the need for potable water supply and distribution. However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, as with the Specific Plan, other development projects in the County would be required to demonstrate that there is adequate water supply and distribution systems to serve the projects. Projects of certain sizes and types would be required to have water supply assessments prepared to show reliability of water supplies for the project, considering normal, single dry, and multiple dry years over a 20-year horizon. Other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address water supply and distribution impacts.

Furthermore, as demonstrated above, implementation of the Specific Plan would not result in a cumulative impact relative to potable water supply or distribution systems.

In consideration of the preceding, the Specific Plan's contribution to cumulative water impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.13.2.4 EXISTING REGULATIONS

The following laws, regulations, plans, or guidelines that pertain to water supply and distribution apply to the Specific Plan and are described in detail in Section 5.13.2.1, *Environmental Setting*, above.

- 2015 Update of the State Model Water Efficient Landscape Ordinance
- California Green Building Standards Code Sections 4.3 and 5.3
- Kings County Code of Ordinances Article VI, Plumbing Code
- Kings County Improvement Standards

5.13.2.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.13-3 and 5.13-4.

5.13.2.6 MITIGATION MEASURES

No significant adverse impacts related to water supply and distribution were identified and no mitigation measures are required.

5.13.2.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant adverse impacts related to water supply and distribution were identified.

5.13.3 Storm Drainage System

5.13.3.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal, state, and local laws, regulations, plans, or guidelines related to drainage systems that are applicable to the Specific Plan are summarized below.

Federal

National Pollutant Discharge Elimination System Program

Under the National Pollution Discharge Elimination System (NPDES) program, all facilities that discharge pollutants into waters of the United States are required to obtain an NPDES permit. Requirements for stormwater discharges are also regulated under this program.

State

State Water Resources Control Board Construction General Permit

SWRCB has adopted a statewide Construction General Permit under Water Quality Order 2009-0009-DWQ (as amended Orders No. 2010-0014-DWQ and No. 2012-0006-DWQ) for stormwater discharges associated with construction activity. These regulations prohibit the discharge of stormwater from construction projects that include one acre or more of soil disturbance. Construction activities subject to this permit include clearing, grading, and other disturbance to the ground, such as stockpiling or excavation, that results in soil disturbance of at least one acre of total land area. Individual developers are required to submit Permit Registration Documents (PRDs) to SWRCB for coverage under the NPDES permit prior to the start of construction. The PRDs include a Notice of Intent, risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to SWRCB via the Stormwater Multiple Application and Report Tracking System website.

The NPDES Construction General Permit requires all dischargers to (1) develop and implement a SWPPP, which specifies best management practices (BMPs) to be used during construction of the project; (2) eliminate or reduce non-storm water discharge to stormwater conveyance systems; and (3) develop and implement a monitoring program of all specified BMPs. The two major objectives of the SWPPP are to (1) help identify the sources of sediment and other pollutants that affect the water quality of stormwater discharges and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-storm water discharges.

The updated Construction General Permit (2012-0006-DWQ), effective on September 2, 2012, also requires applicants to comply with post-construction runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 permit.

Local

Kings County Improvement Standards

The Kings County Improvement Standards specify the design improvements for streets, storm drains, sanitary sewers, and water supply. As outlined in Section 101 (Purpose and Standards) of the improvement standards, the standards serve as an engineering reference for Kings County staff and others in the following areas of development:

- **Development conditions:** these standards shall be consulted when requirements of an engineering or public works nature are to be applied to a project as conditions of development.
- **Development design:** these standards shall be used by developers' engineers when designing development improvements for County approval and by Public Works staff when reviewing improvement plans.
- **Development Inspection:** these standards shall be referenced by private contractors when constructing improvements to County requirements and by Public Works staff when inspecting such improvements for preliminary and final approval (Kings County 2003.

The design standards for drainage systems are provided in Article 4 (Stormwater and Other Drainage) of the improvement standards. This article includes storm drainage fees, hydrologic and hydraulic design requirements, the types of drainage systems permitted, and drainage construction requirements.

Existing Conditions

Regional Drainage

The Kings County storm water system is primarily associated with runoff from County roadways. The system consists primarily of roadside ditches serving to collect and contain runoff from urbanized areas. There is a limited amount of storm water collection pipelines and detention basins in the County. These pipeline systems are located in the community of Armona and several County Service Areas. A comprehensive Storm Drain Master Plan does not exist for the County. Individual development projects in the County have been required to develop site-specific solutions to storm drainage issues.

The topography of the County is relatively flat and does not contain natural drainage channels. Irrigation canals are not used by the County for conveyance or disposal of storm water runoff. Due to the topography, the common method of storm water collection and disposal is to use retention basins excavated below ground level or to use remnants of sloughs that had once served as natural drainages. Drainage from developed areas is commonly directed to street curbs and gutters. The drainage is conveyed along the surface to inlets that direct the water to storm drain pipelines, and ultimately to retention basins (Kings County 2012).

Plan Area Drainage

There are no local or regional stormwater drainage improvements in or surrounding the Plan Area. All stormwater currently sheet flows throughout the Plan Area and directly percolates into the site soil. The Plan Area gently slopes and drains to the southeast at approximately one-to-two percent slopes.

Thresholds of Significance

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

U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

5.13.3.2 ENVIRONMENTAL IMPACTS

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

Impact 5.13-5: Development pursuant to the Specific Plan would result in the construction of new drainage improvements and facilities; however, their construction and operation would no cause significant environmental effects. [Threshold U-1]

Impact Analysis. Following is a discussion of the potential drainage improvements and facility impacts resulting from development projects that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area (Phase One Buildout), which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

As detailed under Impact 5.7-3 of Section 5.7, *Hydrology and Water Quality*, proposed development in the Plan Area under the Specific Plan would alter the onsite drainage patterns with the development of the buildings, roadways, and associated site improvements. Implementation of the Specific Plan would require drainage improvements as detailed in Impact 5.7-3. In order to ensure implementation of the required storm drain

improvements, individual development projects would require site-specific hydrology and hydraulic studies of the onsite and immediate offsite storm drain systems to determine capacity and integrity of the existing systems prior to approval by the Kings County Public Works Department.

Additionally, construction and installation of all drainage improvements needed to accommodate development under the Specific Plan are subject to review and approval by the Kings County Public Works Department. All drainage improvements are also required to meet the requirements of the Kings County Improvement Standards, including those of Article 4 (Stormwater and Other Drainage). This article includes storm drainage fees, hydrologic and hydraulic design requirements, the types of drainage systems permitted, and drainage construction requirements.

Furthermore, new development accommodated by the Specific Plan would trigger the Construction General Permit (CGP) requirements for post-construction storm water management, which requires post-construction runoff amounts to not exceed pre-construction runoff amounts. Pursuant to the CGP's requirements for post-construction storm water management development in the Plan Area would incorporate BMPs with each development project to provide water quality treatment and runoff reduction and/or detention. Implementation of BMPs would also serve to minimize increases in runoff.

Finally, the potential environmental impacts associated with the Specific Plan's drainage improvements and facilities are analyzed throughout this DEIR. As substantiated in other topical sections of the DEIR, development of the Specific Plan's drainage improvements would not result in any physical environmental effects beyond those identified in those sections, if any.

Based on the preceding, development of the Specific Plan's drainage system improvements would not result in any impacts.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As substantiated above, development of the Specific Plan's drainage system improvements and facilities would not result in any impacts.

Specific Plan – Offsite Water Infrastructure Improvements

As noted above, in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue. The water main would stretch along this roadway for approximately 4.2 miles and would run from the Plan Area to the new SWTP (see Figure 3-6, *Proposed Offsite Water Main Route*). The offsite water infrastructure improvements would not result in the need for the relocation or construction of new or expanded drainage facilities. Therefore, no impact would occur.

5.13.3.3 CUMULATIVE IMPACTS

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County.

Implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in cumulative drainage impacts in the County. For example, other planned projects could increase impervious areas and thus increase local runoff rates at those project sites. However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, as with the Specific Plan, other development projects in the County would be required to capture and infiltrate runoff, as well limit post-development runoff discharges to no greater than pre-development runoff rates, in accordance with the NPDES permit requirements. Other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address drainage impacts.

Furthermore, as demonstrated above, implementation of the Specific Plan would not result in a cumulative impact relative to drainage facilities.

In consideration of the preceding, the Specific Plan's contribution to cumulative drainage facility impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.13.3.4 EXISTING REGULATIONS

The following laws, regulations, plans, or guidelines that pertain to drainage apply to the Specific Plan and are described in detail in Section 5.13.3.1, *Environmental Setting*, above.

- Statewide Construction General Permit (Order No. 2012-0006-DWQ)
- Kings County Improvement Standards

5.13.3.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impact would be less than significant: 5.13-5.

5.13.3.6 MITIGATION MEASURES

No significant adverse impacts related to drainage systems were identified and no mitigation measures required.

5.13.3.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant adverse impacts related to drainage systems were identified.

5.13.4 Solid Waste

5.13.4.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, or guidelines related to solid waste that are applicable to the Specific Plan are summarized below.

Federal

Resource Conservation and Recovery Act of 1976

The Resource Conservation and Recovery Act of 1976 (Title 40 of the Code of Federal Regulations), Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

State

California Green Building Standards Code

CALGreen establishes mandatory nonresidential measures for waste reduction, disposal, and recycling under Chapter 5 (Nonresidential Mandatory Measures). For example, Section 5.408 (Construction Waste Reduction, Disposal, and Recycling) requires the preparation and implementation of a construction waste management plan. This section also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. CALGreen is updated on a three-year cycle; the 2016 CALGreen took effect on January 1, 2017.

Assembly Bill 341

Assembly Bill 341 (Chapter 476) increased the statewide solid waste diversion goal to 75 percent by 2020. The law, passed in 2011, mandates recycling for businesses producing four or more cubic yards of solid waste per week. This commercial recycling law took effect July 1, 2012. Under the law, businesses must separate recyclables from trash and then either subscribe to County recycling services, self-haul their recyclables, or contract with a permitted private recycler.

Assembly Bill 1826

Assembly Bill 1826 (California Public Resources Code Sections 42649.8 et seq.), signed into law in September 2014, requires recycling of organic matter by businesses that generate 4 cubic yards or more of commercial solid waste per week. This law also requires that local jurisdictions implement an organic waste recycling program to divert organic waste generated by businesses. In early 2020, using 2018/2019 Statewide Waste Characterization Study data and 2019 Recycling and Disposal Reporting System data, CalRecycle will determine if the statewide disposal of organic waste has decreased by 50 percent by 2020 (using 2014 as a baseline). If it has not decreased by 50 percent, then the organic recycling requirements on businesses will expand to include businesses that generate two cubic yards or more of commercial solid waste per week (CalRecycle 2019a).

Assembly Bill 939

Assembly Bill (AB) 939 (California Integrated Solid Waste Management Act of 1989; Public Resources Code 40050 et seq.) established an integrated waste-management system that focused on source reduction, recycling, composting, and land disposal of waste. AB 939 required every California city and county to divert 50 percent of its waste from landfills by the year 2000. Compliance with AB 939 is measured in part by comparing solid waste disposal rates for a jurisdiction with target disposal rates; actual rates at or below target rates are consistent with AB 939. AB 939 also requires California counties to show 15 years of disposal capacity for all jurisdictions in the county or show a plan to transform or divert its waste.

Local

Kings County Integrated Waste Management Plan

With the enactment of AB 939, the State of California has required each city and county to prepare solid waste management planning documents that will demonstrate how each jurisdiction will reduce the amount of waste that it sends to landfills by 50 percent by the year 2000. These planning documents are known as Source Reduction and Recycling Elements (SRREs) and Household Hazardous Waste Elements (HHWEs). In addition to these documents, each county is required to develop a County Integrated Waste Management Plan (CIWMP) and Siting Element that will demonstrate long-term ability to ensure the implementation of countywide diversion programs and provide adequate disposal capacity for local jurisdictions through the siting of disposal and transformation facilities.

In response to AB 939, the County prepared the CIWMP and a Siting Element. The SRRE and HHWE applicable to the Specific Plan were developed by the Kings County Waste Management Agency.

Kings County Code of Ordinances

In order to protect the health, safety and welfare of the Kings County residents and in order to meet the statutory waste diversion mandates required by California Public Resources Code Section 41780 et seq., Chapter 13 (Solid Waste Collection and Disposal) of the Kings County Code of Ordinances adopts a coordinated county-wide program for the safe, economical and efficient collection, storage, transportation and disposal of solid waste. For example, Section 13-11 (Solid Waste Separation Requirements) mandates the separation of recyclables to be disposed of in line with the requirements of AB 939.

5.13.4.2 EXISTING CONDITIONS

The Plan Area is in the service area of Kings Waste and Recycling Authority (KWRA). KWRA is a Joint Powers Authority comprised of the Cities of Hanford, Lemoore, Corcoran, and the unincorporated portion of the County. KWRA receives solid waste, including recyclable materials, from all unincorporated areas in the County. Solid waste is collected by KWRA and transferred to KWRA's Material Recovery Facility and Transfer Station at 7803 Hanford-Armona Road in the City of Hanford. Waste that is not recycled at the Material Recovery Facility and Transfer Station primarily disposed of at the Avenal Landfill and the Chemical Waste Management Inc. Landfill.

Hazardous waste is disposed of at Kettleman Hills Hazardous Waste Facility approximately four miles northwest of the Plan Area; the facility is managed and operated by Waste Management. The facility is a fully permitted, 1,600-acre hazardous waste treatment, storage and disposal facility that is permitted by the County and inspected monthly by the Kings County Health Department, Environmental Health Services.

Green waste is disposed at the Kochergen Farms Composting Facility; the facility is managed and operated by Kochergen Farms Composting, Inc.

Solid Waste Disposal

According to 2018 data (most recent data available) from the California Department of Resources Recycling and Recovery (CalRecycle), 97 percent of solid waste collected in the County by KWRA was taken to the Avenal and Chemical Waste Management Inc. landfills (CalRecycle 2019b). The details of these facilities are described in Table 5.13-4.

Table 5.13-4 Landfills Serving Kings Waste and Recycling Authority

Landfill	Remaining Capacity (million cubic yards)	Maximum Permitted Capacity (million cubic yards)	Maximum Permitted Throughput (tons per day)	Average Daily Disposal (2017) [1] (tons)	Estimated Closing Date
Avenal Landfill 1200 Skyline Blvd Avenal, CA 93204	30,300,000	36,300,000	6,000	372	12/30/2020
Chemical Waste Management, Inc. Unit B-17 35251 Old Skyline Road Kettleman City , CA 93239	17,468,595	18,400,000	2,000	462	01/01/2030
Total	**47,768,595**	**54,700,000**	**8,000**	**834**	**-**

Sources: CalRecycle 2019c, 2019d, 2019e.
[1] Average daily disposal is estimated based on 300 operating days per year. Each facility is open six days per week, Monday through Saturday, except certain holidays.

Collectively, Avenal and Chemical Waste Management Inc. landfills have a remaining disposal capacity of approximately 47 million cubic yards as shown in Table 5.13-4.

Compliance with AB 939 is measured in part by actual disposal rates compared to target rates for residents and employees, respectively; actual disposal rates at or below target rates are consistent with AB 939. Target disposal rates for KWRA are 4.4 pounds per day (ppd) per resident and 15.9 ppd per employee. Actual disposal rates in 2017 were 3.9 ppd per resident and 12.2 ppd per employee (CalRecycle 2019f). Thus, current solid waste diversion is consistent with AB 939.

Thresholds of Significance

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

U-4 Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

U-5 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following threshold would be less than significant:

- Threshold U-5

This impact will not be addressed in the following analysis.

5.13.4.3 ENVIRONMENTAL IMPACTS

Impact Analysis

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

Impact 5.13-6: Existing solid waste facilities would be able to accommodate solid waste generated by development accommodated by the Specific Plan, and development would comply with solid waste regulations. [Thresholds U-4 and U-5]

Impact Analysis. Following is a discussion of the potential solid waste impacts resulting from urban runoff that would be generated during the construction and operational phases of development projects that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area (Phase One Buildout), which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Construction Phase

Onsite land uses primarily consist of active and fallow agricultural land or rangeland, as shown in Figure 3, *Aerial Photograph*. The Plan Area has historically been used for farming, and portions presently contain an orchard of almond trees. Power lines on wooden poles line the northern site boundary and traverse the entire stretch of the central portion of the Plan Area from the northern to southern boundary.

Of the 415 acres that make up the Plan Area, approximately 141 acres (or 33 percent) would be developed with a mix of uses under the Specific Plan. Development of the 141 acres would mainly involve site clearing on fallow agricultural land and rangeland. However, development of portions of the 141 acres would also require the removal of existing orchard trees. Development under the Specific Plan would also involve removal of the wooden poles and electrical and telecommunication lines throughout the Plan Area.

Based on the preceding, minimal construction waste would occur from implementation of the Specific Plan. All green waste would be disposed of at the Kochergen Farms Composting Facility, which is managed and operated by Kochergen Farms Composting, Inc. Additionally, the electrical infrastructure to be removed is not associated with or contains hazardous materials. All electrical infrastructure to be removed would be hauled offsite to the appropriate disposal or recycling facility. Specifically, electrical infrastructure to be removed would be hauled off to KWRA's Material Recovery Facility and Transfer Station. Waste that is not recycled at the Material Recovery Facility and Transfer Station primarily disposed of at the Avenal Landfill and the Chemical Waste Management Inc. Landfill.

The removal of the electrical poles may cause a strain on existing landfill capacities if waste exceeds the daily permitted capacity for the landfills serving the Plan Area. Collectively, the two primary landfills serving the Plan Area have a daily permitted capacity of 8,000 tons per day (tpd), and an average daily disposal of 834 tpd, (see Table 5.13-4, *Landfills Serving Kings Waste and Recycling Authority*). Therefore, the two landfills have a residual capacity of 7,116 tpd. In Summary, disposal of construction-related solid waste generated by the Specific Plan landfills would not exceed the daily residual capacity of the landfills and no impact would occur.

Operation Phase

Buildout of the Specific Plan is estimated to generate 12,438 ppd of solid waste, as shown in Table 5.13-5.

Table 5.13-5 Estimated Solid Waste Generation

Land Use	Buildout	Solid Waste Generation Rate (ppd per SF or room)	Solid Waste Generation (ppd)
Phase One			
Retail	11,980 SF	0.006	72
Restaurants	19,880 SF	0.005	99
Gas Station	12,369 SF	0.009	111
Hotel	187 Rooms	2	374
Truck Stop	10,890 SF	0.009	98
Phase Two			
Commercial Use	2,336,784 SF	0.005	11,684
		Total (Plan Area Buildout)	**12,438**

Source: CalRecycle 2020g.
Notes: SF = square feet; ppd = pounds per day

As detailed in Table 5.13-5, the two landfills serving the Plan Area have a residual capacity of 7,116 tpd. The estimated 12,438 ppd or 12.44 tpd generated by the Specific Plan would be adequately served by the two landfills serving the Plan Area.

Overall, sufficient landfill capacity is available in the region for the estimated solid waste generated by the Specific Plan during operations, and project development would not require an expansion of landfill capacity. Therefore, no impacts would occur.

Additionally, certain development projects accommodated by the Specific Plan would be subject to the requirements of Assembly Bill 341, which requires all businesses in California that generate four cubic yards or more of waste per week to implement one of the following actions in order to reuse, recycle, compost, or otherwise divert commercial solid waste from disposal:

- Source separate recyclable and/or compostable material from solid waste and donate or self-haul the material to recycling facilities.
- Subscribe to a recycling service with their waste hauler in the service area.
- Provide recycling service to their tenants (if commercial or multifamily complex).
- Demonstrate compliance with the requirements of California Code of Regulations Title 14.

Furthermore, the Specific Plan would not impede Kings County from implementing its requirements under the County's Integrated Waste Management Plan. The requirements of Chapter 13 (Solid Waste Collection and Disposal) of the Kings County Code would also be implemented to ensure that development with the Plan Area complies with all applicable state and federal laws, including, but not limited to AB 939.

Finally, a construction waste management plan would also be required to be submitted and implemented for individual development projects accommodated by the Specific Plan, in compliance with Section 5.408 (Construction Waste Reduction, Disposal and Recycling) of CALGreen. This section also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

Based on the preceding, existing solid waste facilities would be able to accommodate solid waste generated by development accommodated by the Specific Plan, and development would comply with all applicable solid waste reduction and recycling regulations. Therefore, no impact related to solid waste generation or facilities would occur.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As substantiated above, no impact related to solid waste generation or facilities would occur.

Specific Plan – Offsite Water Infrastructure Improvements

As noted above, in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue. The water main would stretch along this roadway for approximately 4.2 miles and would run from the Plan Area to the new SWTP (see Figure 3-6, *Proposed Offsite Water Main Route*).

The offsite water infrastructure improvements would generate construction waste. However, a construction waste management plan would be required to be submitted and implemented for the offsite water infrastructure improvements component of the Specific Plan, in compliance with Section 5.408 (Construction Waste Reduction, Disposal and Recycling) of CALGreen. This section also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

Furthermore, construction waste associated with the offsite infrastructure improvements may cause a strain on existing landfill capacities if waste exceeds the daily permitted capacity for the landfills serving the Plan Area. Collectively, the two primary landfills serving the Plan Area have a daily permitted capacity of 8,000 tpd, and an average daily disposal of 834 tpd, (see Table 5.13-4, *Landfills Serving Kings Waste and Recycling Authority*). Therefore, the two primary landfills have a residual capacity of 7,116 tpd and disposal of construction waste that would be disposed of in these landfills would not exceed the daily residual capacity of the landfills. Therefore, no impact would occur.

5.13.4.4 CUMULATIVE IMPACTS

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County.

Implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, could result in cumulative solid waste impacts in the County. As with the Specific Plan, other planned projects in Kings County would result in the generation of solid waste under the construction and operation phases. However, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, as with the Specific Plan, other development projects in the County would be required to demonstrate that there is adequate capacity in the landfills serving the projects. Other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address solid waste impacts.

Furthermore, as demonstrated above, implementation of the Specific Plan would not result in a cumulative impact relative to solid waste.

In consideration of the preceding, the Specific Plan's contribution to cumulative solid waste impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.13.4.5 EXISTING REGULATIONS

The following laws, regulations, plans, or guidelines that pertain to solid waste apply to the Specific Plan and are described in detail in Section 5.13.4.1, *Environmental Setting*, above.

- California Green Building Standards Code Section 5.408
- Assembly Bills 939, 341, and 1826
- Kings County Integrated Waste Management Plan
- Kings County Code of Ordinances Chapter 13, Solid Waste Collection and Disposal.

5.13.4.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impact would be less than significant: 5.13-6.

5.13.4.7 MITIGATION MEASURES

No significant adverse impacts related to solid waste were identified and no mitigation measures required.

5.13.4.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant adverse impacts related to solid waste were identified.

5.13.5 Electric Power and Natural Gas Facilities

5.13.5.1 REGULATORY BACKGROUND

State and local laws, regulations, plans, or guidelines related to other utilities that are applicable to the Specific Plan are summarized below.

State

California Energy Commission

The California Energy Commission (CEC) was created in 1974 as the state's principal energy planning organization in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecast statewide electricity needs.
- License power plants to meet those needs.
- Promote energy conservation and efficiency measures.
- Develop renewable energy resources and alternative energy technologies.
- Promote research, development, and demonstration.
- Plan for and direct the state's response to energy emergencies.

California Energy Benchmarking and Disclosure

AB 1103 (2007) requires that electric and gas utilities maintain records of the energy consumption data of all nonresidential buildings to which they provide service and that by January 1, 2009, upon authorization of a nonresidential building owner or operator, an electric or gas utility shall upload all of the energy consumption data for the specified building to the CalEPA Energy Star Portfolio Manager in a manner that preserves the confidentiality of the customer. This statute further requires a nonresidential building owner or operator

disclose Energy Star Portfolio Manager benchmarking data and ratings, for the most recent 12-month period, to a prospective buyer, lessee, or lender. Enforcement of the latter requirement began on January 1, 2014.

On October 8, 2015AB 802 was signed into law. AB 802 would revise and recast the above provisions. AB 802 directs the CEC to establish a statewide energy benchmarking and disclosure program and enhances the CEC's existing authority to collect data from utilities and other entities for the purposes of energy forecasting, planning, and program design. Among the specific provisions, AB 802 would require utilities to maintain records of the energy usage data of all buildings to which they provide service for at least the most recent 12 complete months. Beginning no later than January 1, 2017, AB 802 would require each utility, upon the request and the written authorization or secure electronic authorization of the owner, owner's agent, or operator of a covered building, as defined, to deliver or provide aggregated energy usage data for a covered building to the owner, owner's agent, operator, or to the owner's account in the Energy Star Portfolio Manager, subject to specified requirements. AB 802 would also authorize the commission to specify additional information to be delivered by utilities for certain purposes.

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977. Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards, which were recently adopted on May 9, 2018, went into effect on January 1, 2020.

The 2016 Standards improve upon the previous 2013 Standards for new construction of and additions and alterations to residential and nonresidential buildings. Under the 2016 Standards, residential and nonresidential buildings are generally 28 and 5 percent more energy efficient than the 2013 Standards, respectively. Buildings that were constructed in accordance with the 2013 Building Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the previous 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features. Although the 2016 standards do not achieve zero net energy, they get very close to the state's goal and take important steps toward changing residential building practices in California.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and would require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements. Under the 2019 standards, nonresidential buildings would be 30 percent more energy efficient compared to the 2016 standards, and single-family homes would be 7 percent more energy efficient. When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards.

California Green Building Standards Code

CALGreen was adopted as part of the California Building Standards Code and established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), as well as water conservation and material conservation, both of which contribute to energy conservation. As stated above, the 2019 CALGreen standards become effective January 1, 2020.

2012 Appliance Efficiency Regulations

The 2012 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) of the CEC include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce reducing energy demand as well as greenhouse gas (GHG) emissions.

State Greenhouse Gas Regulations

Current State of California guidance and goals for reductions in GHG emissions from stationary sources are generally embodied in Executive Orders S-03-05 and B-30-15; Assembly Bill 32 (AB 32) and Assembly Bill 197 (AB 197); and Senate Bill 32 (SB 32). While these regulations are inherently aimed at reducing GHG emissions, they have a direct relationship to energy conservation. A detailed discussion of these regulations is provided in the Section 5.6, *Greenhouse Gas Emissions*, of the DEIR.

5.13.5.2 EXISTING CONDITIONS

Electricity

Pacific Gas & Electric (PG&E) supplies electricity to much of northern and central California—from Humboldt and Shasta counties in the north to Kern and Santa Barbara counties in the south—including the Plan Area. Total electricity consumption in PG&E's service area is forecasted to increase from 104,868 gigawatt-hours (GWh) in 2016 to 119,633 GWh in 2027 (CEC 2017). Due to the Plan Area consisting of agricultural land and uses(see Figure 3-3, *Aerial Photograph*), no electricity is currently needed to serve the uses.

Natural Gas

PG&E's natural gas (methane) pipe delivery system includes 42,000 miles of distribution pipelines, and 6,700 miles of transportation pipelines. Transportation pipelines send natural gas from fields and storage facilities in large pipes under high pressure. The smaller distribution pipelines deliver gas to individual businesses or residences.

The 2018 California Gas Report (CGR) projects total system demand for PG&E to decline at an annual average rate of 0.4 percent between 2018 and 2035. PG&E anticipates that sufficient supplies will be available from a variety of sources at market-competitive prices to meet existing and projected market demands in its service area (CGEU 2018).

Due to the Plan Area consisting of agricultural land and uses(see Figure 3-3), no natural gas is currently needed to serve the uses.

Thresholds of Significance

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

U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

5.13.5.3 ENVIRONMENTAL IMPACTS

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

Impact 5.13-7: Existing and/or proposed utility facilities would be able to accommodate electricity and natural gas demands of development projects accommodated by the Specific Plan. [Threshold U-1]

Impact Analysis. Following is a discussion of the potential electricity and natural gas impacts resulting from development projects that would be accommodated by the Specific Plan. The analysis considers impacts that would result from Specific Plan buildout of the overall Plan Area (Plan Area Buildout); buildout of the Phase One development area (Phase One Buildout), which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*; and buildout of the major offsite water main improvements.

Specific Plan – Plan Area Buildout

Jackson Ranch is within the service area of Pacific Gas & Electric (PG&E) and would be served by the existing electrical power lines onsite and abutting the northern Plan Area boundary. Specifically, existing power lines on wooden poles line the northern site boundary, abutting Utica Avenue; they also cross traverse the entire stretch of central portion of the Plan Area from the northern to southern boundary. Existing transmission lines and wooden poles would be undergrounded where necessary. New electrical transformers and switch stations would be located in key areas of the Plan Area to provide the necessary electric distribution infrastructure to serve Jackson Ranch. New underground electrical lines would be located within roadways and easements as appropriate and typical for new development.

As with electricity and as an option, PG&E can provide natural gas service to the Plan Area through new regulator stations in key areas of the Plan Area that will connect to existing transmission pipelines offsite. As an alternative, the project applicant/developer may utilize local gas providers to have tanks provided for the uses of the Plan Area. If new underground gas mains are constructed, they be located within roadways and easements as appropriate and typical for new development.

Buildout of the Specific Plan would require electrical services totaling an estimated 25.3 million kilowatt-hours (KWhr) annually and natural gas service up to 35.6 million kilo British thermal units (KBTU) per year (see

Table 5.13-6). These energy and natural gas consumption rates are typical for projects of this size and are modest increases in energy and gas use when considered in the context of PG&E's service territory. However, as note above and as an alternative to natural gas, the project applicant/developer may utilize local gas providers to have tanks provided for the uses of the Plan Area. This option provides more flexibility and may be economically more suitable. This option would also eliminate the need for PG&E to deliver natural gas to the Plan Area.

Table 5.13-6 Projected Electricity and Natural Gas Estimate for the Specific Plan

Land Use	Electricity (kWh/Yr)	Natural Gas (kBTU/Yr)
Phase One		
Regional Shopping Center	89,946	97,206
Fast Food Restaurant w/Drive Thru	265,918	1,966,490
High-Turnover Sit-Down Restaurant	270,752	2,002,230
Truck Stop/Convenience Market/Gas Station	174,644	188,740
Motel	711,184	2,096,410
Parking Lot	87,665	0
Sub-Total	**1,600,108**	**6,351,076**
Phase Two		
Freeway Incubator	3,872,730	7,414,730
Business Center	19,847,810	21,785,764
Sub-Total	**23,720,540**	**29,200,494**
Total	**25,320,648**	**35,551,569**

Source: PlaceWorks 2020.

In addition, development projects accommodated by the Specific Plan would be required to comply with energy efficiency standards set forth by Title 24 of the California Building Code, energy efficiency measures mandated by CALGreen, and the 2012 Appliance Efficiency Regulations. These measures will decrease electricity and gas consumption.

Furthermore, all proposed plans for electrical facilities and infrastructure (and natural gas, if implemented/required) would require coordination with and review by the County Public Works Department and PG&E, and would be implemented in accordance with all required guidelines and standards of PG&E.

Therefore, the Specific Plan would not result in a substantial increase in natural gas and electrical service demands. PG&E would not need to expand its supply and transmission facilities in order to handle the demand generated by the Specific Plan. Therefore, no impact related to electricity or natural gas facilities and consumption would occur.

Additionally, the potential environmental impacts associated with the Specific Plan's electrical and natural gas infrastructure improvements are analyzed throughout this DEIR. As substantiated in other topical sections of the DEIR, development of the needed improvements would not result in any physical environmental effects beyond those identified in those sections, if any.

Specific Plan – Phase One Buildout

The analysis provided above under the *Specific Plan – Plan Area Buildout* discussion applies to the Phase One development area of the Specific Plan, which consists of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*. As substantiated above, no impact related to electricity and natural gas facilities and consumption would occur.

Specific Plan – Offsite Water Infrastructure Improvements

As noted above, in order to provide potable water to future uses of the Plan Area, an offsite water main system would be installed underground within the County's right-of-way along 25th Avenue. The water main would stretch along this roadway for approximately 4.2 miles and would run from the Plan Area to the new STWP (see Figure 3-6, *Proposed Offsite Water Main Route*). The offsite water infrastructure improvements would not result in the need for the relocation or construction of new or expanded electricity or natural gas facilities. Therefore, no impact would occur.

5.13.5.4 CUMULATIVE IMPACTS

The methodology used for the cumulative impact analysis is described in Chapter 4.0, *Environmental Setting*, of this DEIR. At the time the Notice of Preparation for the Special Plan was released, on August 29, 2019, there were no cumulative development projects (past, present, and probable future projects producing related cumulative impacts) proposed in the County. The area considered for cumulative impacts to electricity and natural gas supplies and facilities is PG&E's service area.

The total mid-electricity consumption in PG&E's service area is projected to be 119,633 GWh in 2027. Gas demand in PG&E's service area is projected to decline at an annual average rate of 0.4 percent between 2018 and 2035. PG&E anticipates gas supplies would be sufficient to meet existing and projected market demands in its service area. Implementation of the Specific Plan in conjunction with other planned projects in other areas of the County, in accordance with the projections of the Kings County General Plan, and within PG&E's service area would increase electricity and natural gas demands.

The forecasts provided by CEC are used in several applications, including Californian Public Utilities Commission's (CPUC) resource planning. CPUC has identified the Integrated Energy Policy Report process as "the appropriate venue for considering issues of load forecasting, resource assessment, and scenario analyses, to determine the appropriate level and ranges of resource needs for load serving entities in California." The final forecasts would also be an input to the California Independent System Operator Transmission Planning Process as well as controlled grid studies and in electricity supply-demand (resource adequacy) assessments.

As with the Specific Plan, all development projects within PG&E's service area would be required to comply with energy efficiency standards set forth by Title 24 of the California Building Code and the Appliance Efficiency Regulations. Planned projects would also be required to comply with CALGreen requirements related to energy and water conservation. These measures would reduce the overall consumption of electricity and natural gas. It is anticipated that electricity and natural gas demands by most other projects would be accounted for in the above-referenced demand forecasts.

Additionally, other development projects in the County would be required to undergo discretionary review and would be subject to the same resource protection requirements and CEQA review as the Specific Plan. For example, as with the Specific Plan, other development projects in the County would be required to conduct an analysis of their potential impacts to electricity and natural gas supplies and facilities. Other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address electricity and natural gas impacts.

Furthermore, as demonstrated above, implementation of the Specific Plan would not result in a cumulative impact relative to electricity and natural gas supplies and facilities.

In consideration of the preceding, the Specific Plan's contribution to cumulative electricity and natural gas impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

5.13.5.5 EXISTING REGULATIONS

The following laws, regulations, plans, or guidelines that pertain to electric and natural gas apply to the Specific Plan and are described in detail in Section 5.13.5.1, *Environmental Setting*, above.

- California Building Code Title 24
- California Building Standards Code
- 2012 Appliance Efficiency Regulations

5.13.5.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impact would be less than significant: 5.13-7.

5.13.5.7 MITIGATION MEASURES

No significant adverse impacts related to electric and natural gas facilities were identified and no mitigation measures required.

5.13.5.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant adverse impacts related to electricity and natural gas were identified

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5. Environmental Analysis
UTILITIES AND SERVICE SYSTEMS

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6. Significant Unavoidable Adverse Impacts

At the end of Chapter 1, *Executive Summary*, is a table that summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. Mitigation measures would reduce the level of impact, but the following impacts would remain significant, unavoidable, and adverse after mitigation measures are applied:

Air Quality

- **Impact 5.2-1.** Buildout of the Specific Plan would occur over a period of approximately 20 years or longer. Construction activities associated with buildout of the Specific Plan could generate short-term emissions that exceed the San Joaquin Valley Unified Air Pollution Control District's (SJVAPCD) significance thresholds during this time and cumulatively contribute to the nonattainment designations of the San Joaquin Valley Air Basin (SJVAB). Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce criteria air pollutant emissions from construction-related activities to the extent feasible. However, construction time frames and equipment for site-specific development projects are not available at this time and there is a potential for multiple development projects to be constructed at one time, resulting in significant construction-related emissions. Therefore, despite implementation of Mitigation Measure AQ-1 and AQ-2, Impact 5.2-1 with respect to the Specific Plan – Plan Area Buildout would remain ***significant and unavoidable***.

- **Impact 5.2-2.** Buildout in accordance with the Specific Plan would generate long-term emissions that would exceed SJVAPCD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SJVAB. Mitigation Measures AQ-3 through AQ-7 would reduce emissions to the extent feasible. However, Impact 5.2-2 would remain ***significant and unavoidable*** due to the magnitude of the overall land use development associated with the Specific Plan under both the Plan Area and Phase One buildout.

- **Impact 5.2-5.** The Specific Plan would be inconsistent with the SJVAPCD's air quality management plans because the Specific Plan would cumulatively contribute to the nonattainment designations of the SJVAB. Mitigation Measures AQ-1 through AQ-7 are applicable to Impact 5.2-5 and would lessen impacts associated with inconsistency of the project with the applicable air quality management plans. However, due to the magnitude and scale of the land uses that would be developed, no mitigation measures are available that would reduce operation and construction impacts below SJVAPCD thresholds. Therefore, Impact 5.2-5 with respect to both the Plan Area and Phase One buildout would remain ***significant and unavoidable***.

6. Significant Unavoidable Adverse Impacts

Greenhouse Gas Emissions

- **Impact 5.6-1.** The Specific Plan would result in a substantial increase in greenhouse gas (GHG) emissions. Mitigation Measures GHG-1 and GHG-2 in addition to Mitigation Measures AQ-3 through AQ-7 would reduce GHG emissions to the extent feasible. However, the number of people who may utilize zero- and near-zero emission vehicles and/or electric standby or hybrid electric TRUs is uncertain. As a result, the total reductions that the services provided through these mitigation measures would provide cannot be quantified. Neither the project applicant nor the lead agency (Kings County) can substantively or materially affect reductions in project mobile-source emissions beyond the regulatory requirements. Therefore, Impact 5.6-1 for the Specific Plan (under both the Phase One and Plan Area buildout conditions) would remain ***significant and unavoidable***.

Transportation

- **Impact 5.11-1.**

Caltrans Intersections

Implementation of mitigation measures TRAF-1 and TRAF-2 require payment to Caltrans for the identified improvements. As demonstrated in the Traffic Impact Analysis Report (Appendix G1), the improvements would mitigate traffic impacts at the identified intersections. However, these intersections are under the jurisdiction of Caltrans, and Kings County cannot guarantee timing or implementation of the improvements within Caltrans jurisdiction. Also, the improvements identified in mitigation measures TRAF-1 and TRAF-2 are not part of an adopted plan or program that will guarantee construction of the improvements within a specified period. As a result, Impact 5.11-1 for the Specific Plan (under both the Phase One and Plan Area buildout conditions)would remain ***significant and unavoidable***.

Caltrans Freeway Mainlines

As discussed above, the freeway segments listed would perform unacceptably during the peak hours without mitigation. Mitigating the identified impacts to these freeway segments would require a complete reconstruction of the freeway and additional travel lanes. Since freeways are an interconnected system, it would not be possible, nor effective, to provide isolated spot improvements of one segment of the freeway where deficient operations are observed. Additionally, the facilities are under the jurisdiction of Caltrans and not Kings County. Furthermore, at this time, funding has not been allocated by Caltrans to expand the freeway to its ultimate buildout configuration of six lanes. Therefore, there are no feasible mitigation measures to reduce impacts to these freeway facilities to a level of less than significant. As a result, Impact 5.11-1 with respect to the Specific Plan – Plan Area Buildout would remain would be ***significant and unavoidable***.

7. Alternatives to the Proposed Project

7.1 INTRODUCTION

7.1.1 Purpose and Scope

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines § 15126.6[a]). As required by CEQA, this chapter identifies and evaluates potential alternatives to the Jackson Ranch Specific Plan (Jackson Ranch or Specific Plan).

Section 15126.6 of the CEQA Guidelines explains the foundation and legal requirements for the alternatives analysis in an EIR. Key provisions are:

- "[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (15126.6[b])

- "The specific alternative of 'no project' shall also be evaluated along with its impact." (15126.6[e][1])

- "The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." (15126.6[e][2])

- "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project." (15126.6[f])

- "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (15126.6[f][1]).

- "Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." (15126.6[f][2][A])

- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." (15126.6[f][3])

For each development alternative, this analysis:

- Describes the alterative.
- Analyzes the impact of the alternative as compared to the proposed project.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Assesses whether the alternative would meet most of the basic project objectives.
- Evaluates the comparative merits of the alternative and the project.

According to Section 15126.6(d) of the CEQA Guidelines, "[i]f an alternative would cause…significant effects in addition those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed."

7.1.2 Project Objectives

As described in Section 3.2, *Project Objectives*, of Chapter 3, *Project Description*, the following objectives have been established for the Specific Plan and will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts.

- **Create a Landmark Commercial/Industrial Hub.** Serve the needs of today's travelers by offering a fully amenitized rest stop as well as an ideal location for industrial enterprises. Capitalize on the unique qualities of the region through carefully crafted site planning, architecture, and landscape design. The Specific Plan provides a framework for the implementation of a cohesive project with a readily identifiable visual motif that conveys a pleasing aesthetic quality.

- **Honor the Agricultural Heritage of Kings County.** Establish a center where the agricultural heritage of the site is valued and serves as inspiration for the physical design of the project.

- **Enhance Economic Well-Being.** Encourage new employment opportunities across a variety of industries by providing flexibility in the type of tenants allowed in the Specific Plan. An emphasis on support of new businesses and job creation will enhance the regional and local economy.

- **Optimize Opportunity Through Diversity.** Capitalize on the scale and highly visible location of Jackson Ranch as an opportunity to offer a complementary range of uses including retail, service, hospitality, office, and industrial to appeal to a range of business types.

- **Encourage a Healthy Environment.** In the commercial area pedestrian access and outdoor spaces will be provided.

7.2 ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING/PROJECT PLANNING PROCESS

The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this Draft Environmental Impact Report (DEIR).

7.2.1 Alternative Development Areas

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (CEQA Guidelines § 15126[5][B][1]). In addition, an alternative site need not be considered when implementation is "remote and speculative," such as when the alternative site is beyond the control of a project applicant.

There are no suitable alternative sites in the County that are within the control of the project applicant. In the event land could be purchased of suitable size and developmental characteristics, based on the known general conditions in the southern portion of the County (see Figure 3-1, *Regional Location*), an alternative site would likely have similar impacts after mitigation as the project. Given the size and nature of the Specific Plan and the project objectives, it would be impractical and infeasible to propose the project on an alternate site in the area with fewer environmental impacts.

Additionally, other land in the vicinity of the Plan Area (the project area covered by the Specific Plan) or within the southern portion of the County are similarly used for agricultural purposes and include agricultural soils, the loss of prime farmland would still occur with an alternative site. Given the size and type of the proposed development, similarly sized project and use elsewhere in the San Joaquin Valley Air Basin would result in the same project-level and cumulative air quality and greenhouse gas emission impacts. Also, an alternative site would have similar traffic impacts that would be significant and unavoidable, because Kings County cannot guarantee implementation of improvements outside of its jurisdiction. Therefore, analysis of an alternative site for the Specific Plan is neither meaningful nor necessary, because the significant impacts resulting from the project would not be avoided or substantially lessened by its implementation

7.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Based on the criteria listed above, the following three alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the project but may avoid or substantially lessen any of the significant effects of the project. These alternatives are analyzed in detail in the following sections.

- No Project/No Development Alternative
- No Project/Existing General Plan Alternative
- Reduced Intensity Alternative

An EIR must identify an "environmentally superior" alternative and where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the Specific Plan and determined to be environmentally superior, neutral, or inferior. Section 7.7 identifies the Environmentally Superior Alternative.

7.4 NO PROJECT/NO DEVELOPMENT ALTERNATIVE

Section 15126.6(e) of the CEQA Guidelines requires analysis of the No Project Alternative. In accordance with the CEQA Guidelines, the No Project/No Development Alternative for a development project on an identifiable property consists of the circumstance under which the project does not proceed as provided by Section 15126.6(e)(3)(B) of the CEQA Guidelines. Section 15126.6(e)(3)(B) provides that, "In certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained." Under this alternative, the Specific Plan would not be implemented and no new development would occur, however, the existing conditions would remain in operation.

This No Project/No Development Alternative assumes the Specific Plan would not be implemented and no new development would occur. The existing agricultural uses and operations of the Plan Area would remain under this alternative, and no offsite infrastructure improvements would be implemented. None of the impacts of the Specific Plan, adverse or beneficial, would result. Accordingly, the No Project/No Development Alternative provides a comparison between the environmental impacts of the Specific Plan as compared to the environmental conditions, resulting from not approving or denying the Specific Plan.

7.4.1 Agriculture and Forestry Resources

The No Project/No Development Alternative would continue the existing agricultural uses and operations in the Plan Area. Implementation of this alternative would avoid the significant impacts to agricultural resources that would occur from implementation of the Specific Plan and impacts would be reduced compared to the Specific Plan.

7.4.2 Air Quality

Under the No Project/No Development Alternative, no new development would occur on- or offsite and no construction, demolition, or operational activities and related air quality emissions would occur. In addition, by maintaining existing agricultural uses throughout the Plan Area, an increase in traffic operational-related air emissions would not occur. Therefore, overall air quality impacts would be reduced and the significant and unavoidable operational-related regional emission impacts would be eliminated. No impacts related to air quality would occur under the No Project/No Development Alternative and impacts would be reduced compared to the Specific Plan.

7.4.3 Biological Resources

The No Project/No Development Alternative would continue the existing agricultural uses and operations in the Plan Area. No grading or development would occur on- or offsite under this alternative and there would

be no potential impacts to sensitive wildlife species, and migratory and nesting birds that may be present in the Plan Area. Therefore, the No Project/No Development Alternative would avoid all on- and off-site disturbances and impacts to biological resources would not occur. Therefore, impacts under this alternative would be reduced compared to the Specific Plan.

7.4.4 Cultural Resources

The No Project/No Development Alternative would continue the existing agricultural uses and operations in the Plan Area. No grading or development would occur on-or offsite under this alternative and there would be no potential impacts to subsurface archaeological resources that may exist beneath the ground surface. Therefore, this alternative would reduce impacts to archaeological resources compared to the Specific Plan.

7.4.5 Greenhouse Gas Emissions

Under the No Project/No Development Alternative, no new development would occur on- or offsite and no construction or operational activities and related GHG emissions would occur. In addition, by maintaining existing agricultural uses throughout the Plan Area, an increase in traffic operational-related GHG emissions would not occur. Therefore, overall GHG impacts would be reduced and the significant and unavoidable operational-related GHG emission impacts would be eliminated. No impacts related to GHG emissions would occur under the No Project/No Development Alternative and impacts would be reduced compared to the Specific Plan.

7.4.6 Hydrology and Water Quality

Existing water quality conditions, groundwater supplies, drainage patterns, and runoff water amounts would remain "as is" under this alternative because no new development would occur. This alternative would not introduce new sources of water pollutants from either the construction or operation phases as no new development would occur. Additionally, this alternative would not require the storm drain infrastructure improvements that would be required under the Specific Plan. However, this alternative would not include installation of new low-impact development (LID), source control, site design, and treatment control best management practices (BMPs) to minimize runoff and water pollution, which would occur under the Specific Plan. These required measures have a beneficial impact on stormwater quality. Any storm water leaving the Plan Area would continue to not be filtered and contain sediment and other potential pollutants associated with the agricultural uses and operations. Overall, hydrology and water quality impacts would be slightly greater under this alternative but as with the Specific Plan, would be less than significant.

7.4.7 Land Use and Planning

Given that the Specific Plan would not be adopted, the No Project/No Development Alternative would not require a general plan amendment or zone change. This alternative would continue the existing agricultural uses and operations, and the County's existing general plan land use and zoning designations for the Plan Area (General Agriculture-40 Acre and General Agriculture-40 [AG-40] District, respectively) would remain unchanged. Continued operation of the agricultural uses and operations is consistent with the underlying land

use and zoning designations. However, this alternative would not provide a catalyst for development or create an innovative service industrial and commercial center. Additionally, the Specific Plan's impacts to land use and planning were determined to be less than significant in this DEIR. Overall, land use impacts of this alternative compared to the Specific Plan would be similar to those of the Specific Plan and less than significant.

7.4.8 Noise

Under this alternative, no new development would occur. Therefore, this alternative would not result in any construction noise in the area. Additionally, no new operational noise (mobile or stationary) would be generated given that no development would occur under this alternative. However, the Specific Plan's noise impacts were determined to be less than significant in this DEIR. Overall, noise impacts of this alternative compared to the Specific Plan would be similar to those of the Specific Plan and less than significant.

7.4.9 Public Services

Under this alternative, no new development would occur. Therefore, there would be no increase in demand for fire or police services. Although the Specific Plan's impacts related to fire and police services were determined to be less than significant in this DEIR, the public services impacts would be reduced under this alternative compared to the Specific Plan.

7.4.10 Transportation

Under the No Project/No Development Alternative, no new employees or commercial/industrial uses would be introduced in the Plan Area; therefore, no new vehicle trips or vehicle miles traveled would be generated. The existing daily trips (associated with agricultural workers) would remain at current conditions and all roadway segments and intersections would maintain existing levels of service and vehicle miles travelled. Additionally, under this alternative there would be no need for any improvements to Caltrans facilities. Overall, transportation impacts would be reduced under this alternative to a less than significant level and the significant and unavoidable traffic impacts that would occur from the Specific Plan would be eliminated.

7.4.11 Tribal Cultural Resources

The No Project/No Development Alternative would continue the existing agricultural uses and operations in the Plan Area. No grading or development would occur on-or offsite under this alternative and there would be no potential impacts to subsurface tribal cultural resources that may exist beneath the ground surface. Therefore, this alternative would reduce impacts to tribal cultural resources compared to the Specific Plan.

7.4.12 Utilities and Service Systems

Under the No Project/No Development Alternative, no new employees or commercial/industrial uses would be introduced in the Plan Area. The alternative would continue the existing agricultural uses and operations in the Plan Area. Under existing conditions, there are no potable water or wastewater improvements in the Plan Area. Unlike the Specific plan, there would be no need under this alternative to construct any infrastructure

improvements for the existing agricultural uses and operations. No additional demand for regional water supplies would occur, and no additional wastewater would be conveyed to the regional wastewater treatment facilities.

Similarly, no additional drainage infrastructure would be developed under this alternative, and runoff in the Plan Area would remain in its current condition and would not connect to or require capacity in the regional storm water system. Solid waste generation would remain the same as existing conditions and increases in solid waste generation would not occur with this alternative.

Therefore, impacts to utilities and service system would be reduced under this alternative compared to the Specific Plan and less than significant.

7.4.13 Conclusion

7.4.13.1 ABILITY TO REDUCE IMPACTS

The No Project/No Development Alternative would eliminate the significant and unavoidable impacts related to air quality, greenhouse gas emissions, and transportation that would occur from implementation of the Specific Plan. This alterative would also reduce impacts related to agricultural and forestry resources, biological resources, cultural resources, public services, tribal cultural resources, and utility and service systems. Impacts related to hydrology and water quality would be slightly greater under this alternative; impacts to noise and land use and planning would be similar compared to the Specific Plan.

7.4.13.2 ABILITY TO ACHIEVE PROJECT OBJECTIVES

Implementation of the No Project/No Development Alternative means that no new development would occur in the Plan Area, and none of the project objectives would be achieved under this alternative. This alternative would not create a landmark commercial/industrial hub (first objective); honor the agricultural heritage of Kings County (second objective); enhance economic well-being (third objective); optimize opportunity through diversity (fourth objective); and encourage a healthy environment (fifth objective).

7.5 NO PROJECT/EXISTING GENERAL PLAN ALTERNATIVE

Under the No Project/Existing General Plan Alternative, the current general plan land uses and zoning district of the Plan Area (General Agriculture-40 Acre and General Agriculture-40 [AG-40] District, respectively) would remain in effect. Development in accordance with the existing general plan and zoning would occur in the Plan Area. The General Agriculture-40 Acre land use designation applies to rural areas of the County and allows intensive agricultural uses that, by their nature, may be incompatible with urban uses. The General Agriculture-40 District is intended primarily for application to rural areas of the County, which are generally characterized by extensive and intensive agricultural uses of land.

Under this alternative, the existing agricultural uses and operations, or more intensive agricultural uses (e.g., field crops that unlike fruit trees, require more intense and frequent disturbance of soils and use of heavy farm equipment; agricultural produce processing, packing, and shipping facilities; animal keeping and sales;

dairy farms), would occur in the Plan Area. The exact type and quantity of agricultural uses and operations that could in the Plan Area could range from the existing agricultural uses and operations remaining or development of a more intensive agricultural use. For this analysis it is assumed that the existing agricultural uses and operations would remain, as determining the impacts of a more intensive agricultural use would be hypothetical and difficult to analyze, since the range is so wide. For example, the environmental impacts of developing filed crops over a dairy farm are very different, with one use having greater impacts than the other.

7.5.1 Agriculture and Forestry Resources

The No Project/Existing General Plan Alternative would continue the existing agricultural uses and operations in the Plan Area. Implementation of this alternative would avoid the significant impacts to agricultural resources that would occur from implementation of the Specific Plan and impacts would be reduced compared to the Specific Plan.

7.5.2 Air Quality

Under the No Project/Existing General Plan Alternative, no new development would occur on- or offsite and no construction, demolition, or operational activities and related air quality emissions would occur. In addition, by maintaining existing agricultural uses throughout the Plan Area, an increase in traffic operational-related air emissions would not occur. Therefore, overall air quality impacts would be reduced and the significant and unavoidable operational-related regional emission impacts would be eliminated. No impacts related to air quality would occur under this alternative and impacts would be reduced compared to the Specific Plan.

7.5.3 Biological Resources

The No Project/Existing General Plan Alternative would continue the existing agricultural uses and operations in the Plan Area. No grading or development would occur on- or offsite under this alternative and there would be no potential impacts to sensitive wildlife species, and migratory and nesting birds that may be present in the Plan Area. Therefore, the No Project/Existing General Plan Alternative would avoid all on- and off-site disturbances and impacts to biological resources would not occur. Therefore, impacts under this alternative would be reduced compared to the Specific Plan.

7.5.4 Cultural Resources

The No Project/Existing General Plan Alternative would continue the existing agricultural uses and operations in the Plan Area. No grading or development would occur on-or offsite under this alternative and there would be no potential impacts to subsurface archaeological resources that may exist beneath the ground surface. Therefore, this alternative would reduce impacts to archaeological resources compared to the Specific Plan.

7.5.5 Greenhouse Gas Emissions

Under the No Project/Existing General Plan Alternative, no new development would occur on- or offsite and no construction or operational activities and related GHG emissions would occur. In addition, by maintaining existing agricultural uses throughout the Plan Area, an increase in traffic operational-related GHG emissions would not occur. Therefore, overall GHG impacts would be reduced and the significant and unavoidable operational-related GHG emission impacts would be eliminated. No impacts related to GHG emissions would occur under the No Project/Existing General Plan Alternative and impacts would be reduced compared to the Specific Plan.

7.5.6 Hydrology and Water Quality

Existing water quality conditions, groundwater supplies, drainage patterns, and runoff water amounts would remain "as is" under this alternative because no new development would occur. This alternative would not introduce new sources of water pollutants from either the construction or operation phases as no new development would occur. Additionally, this alternative would not require the storm drain infrastructure improvements that would be required under the Specific Plan. However, this alternative would not include installation of new low-impact development (LID), source control, site design, and treatment control best management practices (BMPs) to minimize runoff and water pollution, which would occur under the Specific Plan. These required measures have a beneficial impact on stormwater quality. Any storm water leaving the Plan Area would continue to not be filtered and contain sediment and other potential pollutants associated with the agricultural uses and operations. Overall, hydrology and water quality impacts would be slightly greater under this alternative but as with the Specific Plan, would be less than significant.

7.5.7 Land Use and Planning

Given that the Specific Plan would not be adopted, the No Project/Existing General Plan Alternative would not require a general plan amendment or zone change. This alternative would continue the existing agricultural uses and operations, and the County's existing general plan land use and zoning designations for the Plan Area (General Agriculture-40 Acre and General Agriculture-40 [AG-40] District, respectively) would remain unchanged. Continued operation of the agricultural uses and operations is consistent with the underlying land use and zoning designations. However, this alternative would not provide a catalyst for development or create an innovative service industrial and commercial center. Additionally, the Specific Plan's impacts to land use and planning were determined to be less than significant in this DEIR. Overall, land use impacts of this alternative compared to the Specific Plan would be similar to those of the Specific Plan and less than significant.

7.5.8 Noise

Under this alternative, no new development would occur. Therefore, this alternative would not result in any construction noise in the area. Additionally, no new operational noise (mobile or stationary) would be generated given that no development would occur under this alternative. However, the Specific Plan's noise

impacts were determined to be less than significant in this DEIR. Overall, noise impacts of this alternative compared to the Specific Plan would be similar to those of the Specific Plan and less than significant.

7.5.9 Public Services

Under this alternative, no new development would occur. Therefore, there would be no increase in demand for fire or police services. Although the Specific Plan's impacts related to fire and police services were determined to be less than significant in this DEIR, the public services impacts would be reduced under this alternative compared to the Specific Plan.

7.5.10 Transportation

Under the No Project/Existing General Plan Alternative, no new employees or commercial/industrial uses would be introduced in the Plan Area; therefore, no new vehicle trips or vehicle miles traveled would be generated. The existing daily trips (associated with agricultural workers) would remain at current conditions and all roadway segments and intersections would maintain existing levels of service and vehicle miles travelled. Additionally, under this alternative there would be no need for any improvements to Caltrans facilities. Overall, transportation impacts would be reduced under this alternative to a less than significant level and the significant and unavoidable traffic impacts that would occur from the Specific Plan would be eliminated.

7.5.11 Tribal Cultural Resources

The No Project/Existing General Plan Alternative would continue the existing agricultural uses and operations in the Plan Area. No grading or development would occur on-or offsite under this alternative and there would be no potential impacts to subsurface tribal cultural resources that may exist beneath the ground surface. Therefore, this alternative would reduce impacts to tribal cultural resources compared to the Specific Plan.

7.5.12 Utilities and Service Systems

Under the No Project/Existing General Plan Alternative, no new employees or commercial/industrial uses would be introduced in the Plan Area. The alternative would continue the existing agricultural uses and operations in the Plan Area. Under existing conditions, there are no potable water or wastewater improvements in the Plan Area. Unlike the Specific plan, there would be no need under this alternative to construct any infrastructure improvements for the existing agricultural uses and operations. No additional demand for regional water supplies would occur, and no additional wastewater would be conveyed to the regional wastewater treatment facilities.

Similarly, no additional drainage infrastructure would be developed under this alternative, and runoff in the Plan Area would remain in its current condition and would not connect to or require capacity in the regional storm water system. Solid waste generation would remain the same as existing conditions and increases in solid waste generation would not occur with this alternative.

Therefore, impacts to utilities and service system would be reduced under this alternative compared to the Specific Plan and less than significant.

7.5.13 Conclusion

7.5.13.1 ABILITY TO REDUCE IMPACTS

The No Project/Existing General Plan Alternative would eliminate the significant and unavoidable impacts related to air quality, greenhouse gas emissions, and transportation that would occur from implementation of the Specific Plan. This alterative would also reduce impacts related to agricultural and forestry resources, biological resources, cultural resources, public services, tribal cultural resources, and utility and service systems. Impacts related to hydrology and water quality would be slightly greater under this alternative; impacts to noise and land use and planning would be similar compared to the Specific Plan.

7.5.13.2 ABILITY TO ACHIEVE PROJECT OBJECTIVES

Implementation of the No Project/Existing General Plan Alternative means that no new development would occur in the Plan Area, and none of the project objectives would be achieved under this alternative. This alternative would not create a landmark commercial/industrial hub (first objective); honor the agricultural heritage of Kings County (second objective); enhance economic well-being (third objective); optimize opportunity through diversity (fourth objective); and encourage a healthy environment (fifth objective).

7.6 REDUCED INTENSITY ALTERNATIVE

Under the Reduced Intensity Alternative, only Phase One of the Specific Plan—which consists of buildout of the portion of the Plan Area designated as Commercial Thoroughfare in Figure 3-4, *Specific Plan Land Use Plan*—would be developed. As shown in Table 3-2, *Jackson Ranch Specific Plan Land Use Statistical Summary*, this alternative would accommodate up to 161,125 square feet of travel-related commercial space on approximately 27 acres of the overall 415-acre Plan Area and would generate approximately 470 employees. Phase Two, which would accommodate up to 2,230,708 square feet, would not be developed. The development impact area under this alternative would also be reduced compared to the Specific Plan—27 acres versus 141 acres, respectively.

Proposed commercial uses in the 27 acres of this alternative include a 10-acre truck stop, potentially offering a restaurant, service station, and short term resting place for large transport vehicles. The existing agricultural uses and operations of the remaining acreage of the Plan Area would continue under this alternative. Additionally, as with the Specific Plan, this alternative would require construction of the offsite water main (see Figure 3-6, *Proposed Offsite Water Main Route*), roadway improvements along Utica Avenue and 25th Avenue (see Figure 3-4), and wastewater treatment facility (see Figure 3-9, *Wastewater Management Plan*).

7.6.1 Agriculture and Forestry Resources

The Reduced Intensity Alternative would involve development of approximately 27 acres (or 7 percent) of the overall 415-acre Plan Area, with the existing agricultural uses and operations of the remaining acreage of

the Plan Area continuing. Under the Specific Plan, development would be accommodated over 141 acres (or 34 percent) of the Plan Area. Therefore, less agricultural land would be impacted under this alternative. However, as with the Specific Plan, implementation of this alternative would result in significant impacts to agricultural resources. Therefore, impacts under this alternative would be reduced compared to the Specific Plan.

7.6.2 Air Quality

Compared to the Specific Plan, the Reduced Intensity Alternative would involve the development of less square footage (161,125 versus 2,230,708) on less land (27 acres versus 141 acres). However, similar to the Specific Plan, this alternative would still require construction of the offsite water main (see Figure 3-6), roadway improvements along Utica Avenue and 25th Avenue (see Figure 3-4), and wastewater treatment facility (see Figure 3-9). A reduced volume of construction activities and the related emissions would occur under this alternative, resulting in a reduction of construction-related air quality emissions.

In addition, the reduced amount of square footage that would be developed under this alternative would result in less stationary source emissions from equipment onsite and less transportation-related air emissions than the Specific Plan. Therefore, overall air quality impacts would be reduced in comparison to the Specific Plan. However, this alternative would not eliminate the significant and unavoidable operational-related regional emission impacts that would occur under the Specific Plan.

7.6.3 Biological Impacts

The Reduced Intensity Alternative would involve the development of less land (27 acres versus 141 acres) in comparison to the Specific Plan. Therefore, this alternative would result in reduced impacts to sensitive wildlife species and migratory and nesting birds that may be present in the Plan Area. Overall, impacts under this alternative would be reduced compared to the Specific Plan. However, as with the Specific Plan, implementation of this alternative would result in significant impacts to biological resources.

7.6.4 Cultural Resources

Under this alternative, less land (27 acres versus 141 acres) would be developed in comparison to the Specific Plan. Therefore, this alternative would result in reduced impacts to subsurface archaeological resources that may be present in ground surface of the Plan Area. Overall, impacts under this alternative would be reduced compared to the Specific Plan. However, as with the Specific Plan, implementation of this alternative would result in significant impacts to archaeological resources.

7.6.5 Greenhouse Gas Emissions

Compared to the Specific Plan, the Reduced Intensity Alternative would involve the development of less square footage (161,125 versus 2,230,708) on less land (27 acres versus 141 acres). However, similar to the Specific Plan, this alternative would still require construction of the offsite water main (see Figure 3-6), roadway improvements along Utica Avenue and 25th Avenue (see Figure 3-4), and wastewater treatment

facility (see Figure 3-9). A reduced volume of construction activities and the related emissions would occur under this alternative, resulting in a reduction of construction-related GHG emissions.

In addition, the reduced amount of square footage that would be developed under this alternative would result in less stationary source emissions from equipment onsite and less transportation-related GHG emissions than the Specific Plan. Therefore, overall GHG emissions impacts would be reduced in comparison to the Specific Plan. However, this alternative would not eliminate the significant and unavoidable operational-related regional emission impacts that would occur under the Specific Plan.

7.6.6 Hydrology and Water Quality

The Reduced Intensity Alternative would involve development of approximately 27 acres (or 7 percent) of the overall 415-acre Plan Area, with the existing agricultural uses and operations of the remaining acreage of the Plan Area continuing. Under the Specific Plan, development would be accommodated over 141 acres (or 34 percent) of the Plan Area. This alternative would introduce new sources of water pollutants from either the construction or operation phases, but to a much lesser extent than the Specific Plan. Additionally, this alternative would involve a reduction in the amount of storm drain infrastructure improvements that would be required under the Specific Plan. The existing water quality conditions, groundwater supplies, drainage patterns, and runoff water amounts for the remaining 141 acres would remain "as is" under this alternative because no new development would occur in this area. Any storm water leaving the undeveloped portion would continue to not be filtered and contain sediment and other potential pollutants associated with the agricultural uses and operations. Overall, hydrology and water quality impacts would be slightly greater under this alternative but as with the Specific Plan, would be less than significant.

7.6.7 Land Use and Planning

This alternative would involve development of approximately 27 acres (or 7 percent) of the overall 415-acre Plan Area, with the existing agricultural uses and operations of the remaining acreage of the Plan Area continuing. As with the Specific Plan, this alternative would require a general plan amendment, zone change, and adoption of a specific plan in order to develop the 27 acres under a specific plan. Additionally, the Specific Plan's impacts to land use and planning were determined to be less than significant in this DEIR. Overall, land use impacts of this alternative compared to the Specific Plan would be similar to those of the Specific Plan and less than significant.

7.6.8 Noise

Construction- and operation-related noise impacts would be reduced under the Reduced Intensity Alternative because this alternative would decrease the development area by approximately 114 acres—141 acres under the Specific Plan versus 27 acres under this alternative. Although construction activities of this alternative would generate the same peak noise volumes and similar type and volume of construction noise as the Specific Plan, the length of construction time and the associated noise would be shorter. Operational noise would also be reduced under this alternative as traffic-generated and stationary noise sources would decrease in relation to the reduction in commercial and industrial square footage. Overall, impacts under this

alternative would be reduced compared to the Specific Plan. However, as with the Specific Plan, implementation of this alternative would result in less than significant impacts.

7.6.9 Public Services

The Reduced Intensity Alternative would reduce buildout of the Plan Area by approximately 93 percent (or 2,230,708 square feet) compared to the Specific Plan—2,391,833 square feet under the Specific Plan versus 161,125 square feet under this alternative. This would also reduce the number of employees in the Plan Area in relation to the reduction in commercial and industrial square footage—1,617 employees under the Specific Plan versus 470 employees under this alternative. However, as with the Specific Plan, this alternative would not introduce new residences that could demand new services, would include design features to lessen the need for services, and impacts would be less than significant. Overall, the need for public services would be reduced under this alternative compared to the Specific Plan.

7.6.10 Transportation

Construction and operation-related traffic and truck trips would be reduced under the Reduced Intensity Alternative because this alternative would decrease the development area by approximately 80 percent (or 114 acres) and the amount of commercial and industrial square footage by approximately 93 percent (o 2,230,708 square feet). The daily trips would be reduced in relation to the reduction of the building area (approximately 59 percent to 5,414 daily trips under this alternative versus 9,205 under the Specific Plan), which would reduce volumes on all roadway segments and intersections. This alternative would also result in the reduction of vehicle miles traveled. However, due to the volume of traffic that would be generated by commercial space that would be developed under the Reduced Intensity Alternative, this alternative would still require implementation of the mitigation measures that involve roadway improvements to Caltrans facilities, which are not within the jurisdiction of the County, and therefore, the County cannot guarantee implementation of the mitigation measure improvements. Overall, traffic volumes generated from this alternative would be reduced; however, as with the Specific Plan, impacts from implementation of the Reduced Intensity Alternative would also be significant and unavoidable.

7.6.11 Tribal Cultural Resources

Under this alternative, less land (27 acres versus 141 acres) would be developed in comparison to the Specific Plan. Therefore, this alternative would result in reduced impacts to subsurface tribal cultural resources that may be present in ground surface of the Plan Area. Overall, impacts under this alternative would be reduced compared to the Specific Plan. However, as with the Specific Plan, implementation of this alternative would result in significant impacts to tribal cultural resources.

7.6.12 Utilities and Service Systems

The Reduced Intensity Alternative would reduce buildout of the Plan Area by approximately 93 percent (or 2,230,708 square feet) compared to the Specific Plan—2,391,833 square feet under the Specific Plan versus 161,125 square feet under this alternative. This would reduce the number of employees (1,617 employees

under the Specific Plan versus 470 employees under this alternative) in relation to the reduction in commercial and industrial square footage and would also reduce the demand for utilities and service systems. However, similar to the Specific Plan, this alternative would still require construction of the offsite water main (see Figure 3-6) and wastewater treatment facility (see Figure 3-9).

The demand for regional water supplies and generation of wastewater would be approximately 47 percent less than the Specific Plan. Therefore, the impacts related to water supplies and wastewater would be less than that which would occur from implementation of the Specific Plan. Similarly, solid waste generation would be less than the Specific Plan and require less landfill capacity. Therefore, impacts to utilities and service system would be reduced under this alternative but as with the Specific Plan, impacts would remain less than significant.

7.6.13 Conclusion

7.6.13.1 ABILITY TO REDUCE IMPACTS

The Reduced Intensity Alterative would reduce impacts related to agricultural and forestry resources, biological resources, cultural resources, noise, public services, tribal cultural resources, and utility and service systems. Impacts related to hydrology and water quality would be slightly greater under this alternative and impacts to land use and planning would be similar compared to the Specific Plan. However, the Reduced Intensity Alternative would not eliminate the significant and unavoidable impacts related to air quality, greenhouse gas emissions, and transportation that would occur from implementation of the Specific Plan.

7.6.13.2 ABILITY TO ACHIEVE PROJECT OBJECTIVES

Implementation of the Reduced Intensity Alternative would achieve a few of the project objectives—it would honor the agricultural heritage of Kings County (second objective) and encourage a healthy environment (fifth objective). Implementation of this alternative would also achieve the following project objectives, but not to the extent as would be achieved by the Specific Plan: enhance economic well-being (third objective) and optimize opportunity through diversity (fourth objective). For example, the reduction of 2,230,708 square feet of commercial and industrial uses would attract fewer or smaller businesses and less employment opportunities to County. In addition, the smaller development would provide less flexibility to meet the needs of an ever-changing business market. Furthermore, this alternative would not fully meet the objective that calls for the creation of a landmark commercial/industrial hub (first objective). Specifically, this alternative would allow for the creation of a portion of the commercial element of this objective, but the industrial element would not be realized. Although the commercial uses of this alternative would serve the needs of today's travelers by offering a fully amenitized rest stop, it would not provide development areas for industrial enterprises. Therefore, this alternative would eliminate the Plan Area's opportunity to capitalize on the development of an industrial hub.

7.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires a lead agency to identify the "environmentally superior alternative" and, in cases where the "No Project" Alternative is environmentally superior to the proposed project, the environmentally superior

development alternative must be identified. One alternative has been identified as "environmentally superior" to the proposed project:

- Reduced Intensity Alternative

The Reduced Intensity Alternative has been identified as the environmentally superior alternative because it would result in reduced impacts related to agricultural and forestry resources, biological resources, cultural resources, noise, public services, tribal cultural resources, and utility and service systems due to the reduction in square footage and associated vehicular trips. However, significant and unavoidable impacts related to air quality, greenhouse gas emissions, and transportation would continue to occur from implementation of this alternative. Impacts related to hydrology and water quality would be slightly greater under this alternative and impacts to land use and planning would be similar compared to the Specific Plan.

CEQA does not require the lead agency (Kings County) to choose the environmentally superior alternative. Instead, CEQA requires the County to consider environmentally superior alternatives, weigh those considerations against the environmental impacts of the Specific Plan, and make findings that the benefits of those considerations outweigh the harm. "Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts" (CEQA Guidelines § 15126.6[c]).

8. Impacts Found Not to Be Significant

California Public Resources Code Section 21003 (f) states: "…it is the policy of the state that…[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." This policy is reflected in the State California Environmental Quality Act (CEQA) Guidelines (Guidelines) Section 15126.2(a), which states that "[a]n EIR [Environmental Impact Report] shall identify and focus on the significant environmental impacts of the proposed project" and Section 15143, which states that "[t]he EIR shall focus on the significant effects on the environment." The Guidelines allow use of an Initial Study to document project effects that are less than significant (Guidelines Section 15063[a]). Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore, not discussed in detail in the Draft EIR (DEIR).

As substantiated in the Initial Study and described in the Notice of Preparation prepared for the Specific Plan (Appendices A and B, respectively), all impact categories (with the exception of the Aesthetics, Energy, Hazards and Hazardous Materials, Mineral Resources, Population and Housing, Recreation, and Wildfire) were found to have at least one potentially significant impact; therefore, these categories have been evaluated in this DEIR.

8.1 ASSESSMENT IN THE INITIAL STUDY

The Initial Study prepared for the Specific plan in August 2019 determined that impacts listed in Table 8-1 would be less than significant. Consequently, they have not been further analyzed in this DEIR. Please refer to Appendix A for an explanation of the basis of these conclusions. Impact categories and questions below are summarized directly from the CEQA Environmental Checklist, as contained in the Initial Study.

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues		Initial Study Determination
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:		
a)	Have a substantial adverse effect on a scenic vista?	Less than significant impact
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No impact
c)	In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than significant impact
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less than significant impact

8. Impacts Found Not to Be Significant

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Less than significant impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	No impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	Less than significant impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than significant impact
IV. BIOLOGICAL RESOURCES. Would the project:	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	No impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No impact
V. CULTURAL RESOURCES. Would the project:	
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	No impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Less than significant impact
VI. ENERGY. Would the project:	
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than significant impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than significant impact
VII. GEOLOGY AND SOILS. Would the project:	
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	No impact

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
ii) Strong seismic ground shaking?	Less than significant impact
iii) Seismic-related ground failure, including liquefaction?	Less than significant impact
iv) Landslides?	No impact
b) Result in substantial soil erosion or the loss of topsoil?	Less than significant impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less than significant impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less than significant impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No impact
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than significant impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less than significant impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	No impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No impact
X. HYDROLOGY AND WATER QUALITY. Would the project:	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	
iv) impede or redirect flood flows?	No impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No impact
XI. LAND USE AND PLANNING. Would the project:	
a) Physically divide an established community?	No impact
XII. MINERAL RESOURCES. Would the project:	
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	No impact
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No impact

8. Impacts Found Not to Be Significant

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
XIII. NOISE. Would the project result in:	
b) Generation of excessive groundborne vibration or groundborne noise levels?	No impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 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?	No impact
XIV. POPULATION AND HOUSING. Would the project:	
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less than significant impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No impact
XV. PUBLIC SERVICES. 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:	
c) Schools?	No impact
d) Parks?	No impact
e) Other public facilities?	No impact
XVI. RECREATION.	
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less than significant impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No impact
XVII. TRANSPORTATION. Would the project:	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No impact
d) Result in inadequate emergency access?	No impact
XVIII. TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	No impact
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less than significant impact

8. Impacts Found Not to Be Significant

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No impact
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	No impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No impact

8. Impacts Found Not to Be Significant

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9. Significant Irreversible Changes Due to the Proposed Project

Sections 15126(c) and 15126.2(d) of the CEQA Guidelines requires that an Environmental Impact Report (EIR) describe any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. Specifically, the CEQA Guidelines state:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highways improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The proposed irretrievable commitments of nonrenewable resources is not justified (e.g., the project involves the wasteful use of energy).

In the case of the Specific Plan, its implementation would involve a land use, development, and implementation framework to support up to approximately 2.5 million square feet of commercial and employment uses in unincorporated Kings County. Significant irreversible changes that would be caused by the Specific Plan if it is implemented would be:

- Construction activities that would entail the commitment of nonrenewable and/or slowly renewable energy resources; human resources; and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, water, and fossil fuels.
- Operation activities that would require the use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water. The commitment of resources required for the construction and operation of the Specific Plan would limit the availability of such resources for future generations or for other uses during the life of the project.

9. Significant Irreversible Changes Due to the Proposed Project

- An increased commitment of social services and public maintenance services (e.g., police, fire, and water services) would also be required. The energy and social service commitments would be long-term obligations in view of the low likelihood of returning the land to its original condition once it has been developed.

- An increase in vehicle trips would accompany project-related employment growth. Over the long term, emissions associated with such vehicle trips would continue to contribute to the San Joaquin Valley Air Basin's nonattainment designation for ozone (O_3) and particulate matter ($PM_{2.5}$) under the California and National Ambient Air Quality Standards (AAQS), and nonattainment for particulate matter (PM_{10}) under the California AAQS.

- The visual character of the vacant and undeveloped Plan Area would be substantially altered by development projects and activity that would be accommodated by the Specific Plan. This would result in a permanent change in the character of the Plan Area and on- and off-site views in the vicinity of the Plan Area.

- Long-term irreversible commitment of vacant parcels of land in Kings County.

Given the low likelihood that the land at the Plan Area would revert to its original form, the Specific Plan would generally commit future generations to these environmental changes. The commitment of resources to the Specific Plan is not unusual or inconsistent with projects of this type and scope. However, once these commitments are made, it is improbable that the Plan Area would revert back to its current condition. Therefore, the Specific Plan would result in significant irreversible changes to the environment throughout the lifespan of the development that would be accommodated by the Specific Plan.

10. Growth-Inducing Impacts of the Proposed Project

Pursuant to Sections 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the Specific Plan could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects were examined through analysis of the following questions:

- Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?
- Would this project result in the need to expand one or more public services to maintain desired levels of service?
- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which the Specific Plan could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this DEIR.

Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?

The elimination of a physical obstacle to growth, such as the construction or extension of major infrastructure facilities that are not presently in the area, would be considered to be a growth inducing impact. The growth-inducing potential of a project would also be considered significant if it fosters growth in excess of what is assumed in the local master plans and land use plans, or in projections made by regional planning agencies.

10. Growth-Inducing Impacts of the Proposed Project

As described in Chapter 3, *Project Description*, and Section 5.13, *Utilities and Service Systems*, implementation of the Specific Plan would require the construction or extension of major infrastructure facilities and improvements that do not presently exist in the project area and thereby, could facilitate additional growth in unincorporated areas of Kings County. For example, in order to provide wastewater service to the future uses of the Plan Area, a wastewater treatment plant would be developed within the confines of the Plan Area. The wastewater treatment plant is a major infrastructure facility that does not presently exist in Plan Area or region. However, the plant would only serve the needs of Jackson Ranch and not be available to areas or land uses beyond the Plan Area boundary. Therefore, development of this major infrastructure facility would not remove obstacles to growth to accommodate the demands of the Specific Plan at full buildout and would be not considered growth inducing.

Additionally, in order to provide potable water to the future uses of the Plan Area, an offsite potable water main would be installed underground within the County's right-of-way along 25th Avenue, which is a fully-paved roadway that is maintained by the County. As shown in Figure 3-6, *Proposed Offsite Water Main Route*, the proposed water main would run from the northern boundary of the Plan Area to the new Kettleman City Surface Water Treatment Plant (SWTP), which is owned and operated by the Kettleman City Community Services District. The water main would stretch along 25th Avenue for approximately 4.2 miles. Unlike the onsite wastewater treatment plant, this offsite infrastructure improvement could allow for development to occur in undeveloped parcels abutting and surrounding the Plan Area, as well as in undeveloped parcels further north along 25th Avenue. The water main is a major infrastructure improvement that does not presently exist in the Plan Area or region—it would provide a means for future development projects in the area and along 25th Avenue to connect to this water main for potable water needs. Therefore, development of this major offsite infrastructure improvement would remove obstacles to growth to accommodate the demands of the Specific Plan at full buildout and would be considered growth inducing.

Would this project result in the need to expand one or more public services to maintain desired levels of service?

As discussed in Section 5.10, *Public Services*, none of the public service agencies consulted during the preparation of this DEIR indicated that the Specific Plan would necessitate expansion of their existing resources or facilities in order to maintain desired levels of service. Additionally, as discussed in Section 5.10, development accommodated by the Specific Plan would be required to pay public facility impact fees that are allocated to police and fire services and facilities. Funding for police and fire services and facilities would also come from the County's general fund and from property tax collected from the developed parcels and their associated uses of the Specific Plan. The Specific Plan would not, therefore, have significant growth-inducing consequences with respect to public services.

10. Growth-Inducing Impacts of the Proposed Project

Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

During the construction of development projects that would be accommodated by the Specific Plan, a number of design, engineering, service, and construction-related jobs would be created. However, construction-related jobs would not result in a significant population increase because they would be filled by workers in the region and the construction phase would be temporary.

At buildout, operation of Jackson Ranch is estimated to generate approximately 1,617 jobs. However, employment growth as a result of implementation of the Specific Plan is within estimated employment growth in Kings County, and thus would not result in an adverse impact. Additionally, some of the jobs are expected to be filled by the local and regional workforce. Further, although the Specific Plan would result in new permanent employment opportunities and stimulate economic activity in Kings County, it would meet future employment demands anticipated in KCAG's regional growth projections for the County. Therefore, the Specific Plan would not encourage or facilitate economic effects that could significantly affect the environment.

Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

The proposed project consists of a general plan amendment, specific plan, and development code amendment, to allow for development of Jackson Ranch, an innovative service and commercial center consisting of approximately 2.4 million square feet of commercial space. Although the requirement for a general plan amendment may be considered a precedent-setting action, the impacts of subsequent similar actions would require environmental analysis and associated mitigation to ensure that such subsequent impacts would not significantly affect the environment. Additionally, specific plans are routinely approved by cities and counties in California. The proposed Specific Plan would focus development within the Plan Area. Furthermore, pressures to develop other land in the surrounding area would derive from regional economic conditions and market demands for housing, commercial, and industrial land uses that are not directly or indirectly influenced by zoning actions on a particular property. Approval of the Specific Plan would not, therefore, involve a precedent-setting action that could be applied to other properties and thereby encourage or facilitate growth that would not otherwise occur.

10. Growth-Inducing Impacts of the Proposed Project

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11. Organizations and Persons Consulted

Kings County (Lead Agency)

Kings County Community Development Agency

Greg Gatzka, Director

Chuck Kinney, Deputy Director of Planning

Kings County Fire Department

Rick Levy, Fire Marshal

Kings County Sherriff's Office

Mark Bevens, Commander

Kings County Community Services District

Brian J. Skaggs, Summers Engineering, Inc., C/O and Consulting Engineers to Kings County Community Services District

California Department of Transportation

Scott Lau, Associate Transportation Planner

11. Organizations and Persons Consulted

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- AA Computer Graphic Design, Platt College of Computer Graphic Design

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Brunell, R. M. (commander, Coalinga Area). 2019, September 26. Comment letter on Notice of Preparation. California Highway Patrol.

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